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Cover by Dave Skelton

Wacky package-tout adventure game preview — page 10



Triton Quick Disk



C-128



Riteman C Plus

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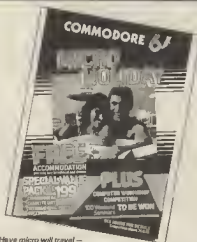
Problem solving is Tommy's
business. What can he do for you?

COMMODORE BUNOLES UP

Commodore's trump card at this year's disappointing UK Commodore Show may have been the arrival of the 128, but it had a few more cards up its sleeve. Notably the announcement that instead of cutting prices on existing products, it's bundling them up into what it calls "added-value packages".

So the Commodore 64 joins the Commodore 16 ranks as a Starter Pack containing a datasette and the International Soccer game — all for £199. Buy either pack before the end of August and you're offered three nights' free accommodation at a choice of 300 hotels in the UK and the Continent. There's also a competition to win a computing weekend — bring your own computer?

The second bumper-bundle involves the ailing Plus/4. That's being packaged up with the 1541 disk drive, MPS 801 printer and Impex's Company Pack 1-2-3 business software, all for £449 — a claimed saving of £198



Have micro will travel — weekend breaks courtesy of Commodore

Could this be an admission that the Plus/4's ROM software is somewhat less than useful?

Finally, there's two peripheral bundles. For £349 you get a 1541 disk drive, the MPS 801 printer and Easy Script. Whilst £229 buys you the 1541, the Commodore modem (including a free year's Compunet subscription) and a selection of Commodore disk games.

There seems to be two considerations behind this masterplan. Primarily, Commodore is determined to kill the dealer discounting that's causing chaos on the High Street — instead of paying less, you get more for the money.

Secondly, Commodore is concerned about the seasonal nature of its business: computer sales tend to slump in the summer and pick up for Christmas. Launching its bargain-bundles in July should help to stem the tide and help dealers to get rid of a lot of existing stock.

LOTS OF PAZAZZ

Acclaimed education software house, ASK, has produced probably the first 'feature' program for the 128 to run in '128 mode'. Called *Pazzazz*, it's also available for the 64. So what is it?

"Pazzazz brings the world of Entertainment to your Commodore computer and puts you in the Producer's chair", enthuses the blurb. The program consists of four sections that allow you to design a scene, compose music, create a performer and control the action.

Confused? Here's an example: you could start with a street scene, then design a character and then animate him or her to dance to the music you've composed.

So you're really getting three packages in one, drawing software, a sprite

editor and a music composer, the unique feature being that you can animate and synchronise the music and movement.

Pazzazz has four preset scenes, a street, circus, graveyard and disco, but you can design your own. There's also a choice of four preset characters and music. You can also load any tune from the Commodore Music Maker series. Each section is stored as a file so, having created a library of them, you can mix and match any combinations.

Files (except the scene graphics) created on the BBC B, Spectrum and Amstrad machines can also be used. Available shortly, Pazzazz should cost £14.95. More details from ASK on 01-874 6046.

SHORTS

Video Goonies: American software house Datsoft has just announced that it's to write a computer game based on 'The Goonies' — Steven Spielberg's latest dollar-grabbing movie. Not released yet in the UK, the film is already raking in the readies Stateside. What will the game be like? Apparently it's an arcade/strategy romp in which the kids search for pirate's treasure, pursued by the evil Mama Fratelli. The Commodore 64 version should be available by September at £9.95 on tape (£14.95) on disk. By the way, Datsoft has a game about Zorro on the way, too.

SHORTS

Speed Loading: Evesham Micro Centre has introduced what looks to be the cheapest fast-loading cartridge for the 64 and 1541 disk drive. Called *Quickdisk Plus*, it costs £19.95 and is based on the original *Quickdisk* software package — with a few utilities thrown in. It's claimed to load and save up to five times faster. Formids disks faster, has improved DOS commands, includes Centronics interface software — there's a reset switch too. We'll be looking at it more closely next month. Meanwhile, more details on 0386 49641.

SHORTS

Interface upgrade: Readers of *Commodore User's* June issue will remember our review of the Print-64 interface device. It looks as though the makers Jansen Elektronik has taken heed of our criticisms because it's taken steps to rectify them. The device now comes with the power supply if locked (connected to the cassette port) and a printed manual in addition to the original diskette. That means you should now be able to use the device with Epson printers. Details from Daniel Dunleavy on 091 281 1665.



Disco scene in Pazzazz — not quite The Hippodrome

MORE RAM FOR 128

Commodore has issued more preliminary information on the RAM expansion cartridge for the C-128, revealed in the June issue.

The cartridge plugs into the machine's user port to give up to 512K additional memory — pretty good going. Its memory is accessed through Basic by using the new commands, *FETCH*, *STASH* and *SWAP* — thankfully there's no pecking and poking to do. Banks of up to 64K of data can be manipulated by specifying the start location in the RAM cartridge, but only in 128 mode.

In CP/M mode the cartridge acts as a RAMdisk (an area of memory that behaves like a 'temporary' disk drive) enabling you to load and save data at one megabyte per second — that's 200 times faster than the 1571 disk drive.

More interesting, the cartridge can be tied into commercial software to increase its capabilities. No prices yet — but with that much memory, it won't be going cheap.

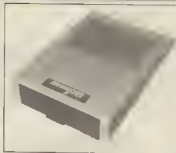
SPEED FILE FOR WAFERDRIVES



Entrepro, the American company that manufactures the 'Waferdrives' for the Commodore 64 (reviewed last issue) has now released the first business software package to appear on wafers.

Called *Speed File*, it's a file manager package costing a mere £25. For the money, you get the System Manager wafer and a blank wafer on which you create a data file for consequent data storage.

1541 ALTERNATIVE



Enhancer 2000: more speed and more software for your money

Until now, alternative storage devices to the 1541 couldn't run floppy disks designed for that machine. That's all set to change with the US built, Enhancer 2000 disk drive.

The Enhancer is claimed not only to be totally 1541 compatible but will run at twice the speed due to a ROM that's just been developed. It should be more reliable too, the drive unit is a more sophisticated affair, built in Japan by Chinon. There's also an external power supply that helps to cut heat build-up in the drive.

Robotics specialists, Commotion, is handling the Enhancer's UK distribution. According to Commotion boss, Tim Cootle, the Enhancer will be packaged up with a free utility disk 'productivity' software and vouchers to obtain discounts from UK software houses. The price? At around \$180-£190, it's not much cheaper than the 1541 itself. Stay tuned for an in-depth review.

BORN IN THE USA

If you've been blasting Bruce Springsteen, Duran Duran, Van Halen or The Police, you might cringe at the thought of hearing them 'interpreted' by the Commodore 64's SID chip. Undaunted, American Hal Leonard Publishing has pursued this landlaid of an idea, to produce a "Hitware" package for each of the above, complete with graphics and picture book.

Described as "computerised rock video" each disk (sorry, Americans don't like tape) contains ten tunes and 'color graphics' displays synchronised to the music. If the graphics don't thrill you, you can gloat at tasteful pics of Bruce or Simon, or Sting or Eddie Van H.

How do they sound? — "fantastic instrumental arrangements", says the blurb. We've not heard them yet but Hitware should be in the UK real soon. Dedicated Bruce fans better start running.



The Boss' Born to Run on the 64

SHORTS

Book for the Plus/4. Micro Press has just published *Plus/4 Magic for Beginners* by Bill Bennett, which we reckon to be the first book dedicated solely to book-stored Plus/4 users. Before you start cheering, at £9.95, it's not much more than

a Basic tutorial. Although the blurb tells you there's a section on the ROM software, it amounts to a mere handful of pages — perhaps there's no more to say about it. More details from Castle House on 0892 39606.

SHORTS

Software for school: If you're taking (or re-taking) O-Levels this year, why not try using your 64 to overcome the gloom of revision. Irish software house, School Software, has released Physics, Chemistry and Biology courses on the 64, each tape

(turbo-loading) costing £7.95. And they claim it's the best educational software around him. Seems the age of video-swearing has arrived. More details from School Software, Meadowdale Estate, Rahoon, Limerick, Ireland.

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Summer Show Blues

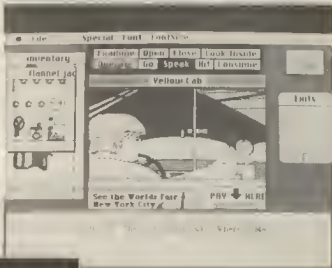
A special report from the Consumer Electronics Show in Chicago

by Virginia Lerman

What no Amiga?" was the disappointed verdict on June's Consumer Electronics Show held in Chicago at the beginning of June.

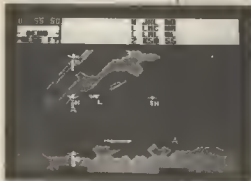
The much talked about new computer from Commodore with its now famous customised graphics chips could have been the one bright spot in an otherwise gloomy show.

Commodore however, were not playing. Instead their stand was dominated by C128s. Dozens of them — supporting a variety of new and interesting software. Notably, 'Jane' — an integrated word processor, database, and graphics package. This really was impressive. Running in 128 mode it is icon-driven, can be controlled with



Above: *Deja Vu* — best game at CES.

Left: *Kennedy Approach* talks you down.



joystick, mouse or keyboard — and really made the 128 look like a viable home-business computer.

But if Commodore were busy giving the hard sell on the 128 they couldn't stop everyone at the show talking about the computer they didn't want them to talk about — the Amiga.

The truth of the matter is that even America's best software houses have now pushed the ageing 64 to its absolute limits. No surprise then that the show was characterised by sequels like *Beach Head II*, *Summer Games II*, and *Winter Games*. All safe, tried and tested game ideas. Nobody was showing anything new because there is nothing new they can do within the constraints of the current hardware.

Trip Hawkins, boss of *Electronic Arts*, described the Show to me as "the lull before the storm". This ac-

curate assessment of the Summer CES seemed at odds with the exaggerated enthusiasm with which an Electronic Arts employee was demonstrating their latest 64 game to me — *Flyer Fox*.

Electronic Arts, Epyx, Braderbund, and even Activision (though to a lesser extent) failed to come up with anything really innovative at the Summer CES. So here's a sneak preview of the best games on show at CES.

● **DEJA VU:** This has to be the number one choice as it provides us with a glimpse of gaming in the future. This 1940's style whodunnit captures the atmosphere of a period Hollywood movie. The game runs on the Macintosh — though Mindscape are also converting it for the Amiga.

The player uses the Mac's mouse to pick items off the screen and put them

down in their required positions. Other commands can also be implemented using icons that represent various actions. It's a high-speed way to play a complex adventure-style puzzle. The impressive thing about the game is that the graphics are so good that no atmosphere is lost by the absence of great tracts of descriptive text.



Computer with a room to let.

● **THERE IS SOMEONE LIVING IN MY COMPUTER:** Ghostbusters programmer David Crone intrigued many a visitor to the Activision stand with the claim in his latest game — *There's Someone Living in My Computer*. I can't tell you yet whether this is going to be a big hit or an outright flop. What I can say is that it's different. So different in fact that Activision's representatives at the show were infuriatingly vague about just what the dag, and little people are up to in the computer.

Adapting a suitably incredulous tone of voice they'd say to anyone who was stupid enough to stand and listen something like "the dog turned up last week . . . We don't know what he's there for yet". Play-wise all that is clear about the "game" so far is that you type in commands in text and some of these are obeyed. For example, the little man will take a shower, exercise, or cook a meal. Why? Watch this space



Hackers are getting



Winter Games does tobacco-free

● **WINTER GAMES:** Another sports simulation par excellence from Epyx, the undisputed World leaders in producing this type of game. Remember they were the people who did *Summer Games* last year? *Winter Games* knocks spots off any sports game I've seen before. Events like the toboggan, Ice Skating, and Ski Jump are

beautiful to look at and even more fun to play. Sports game enthusiasts are going to go overboard about this one.

● **THE HACKER:** The Hacker takes up the wellworn theme of breaking into huge protected, computer systems. To keep on the right side of the law the hacker in this game stumbles into the computer by accident (if only it were that easy) and merely has to work out whose system he has hooked into and what is going on there.

This is basically a graphics adventure dressed up as a mega-hack and it should sell like hot cakes. Now you too can be a hacker!

● **KENNEDY APPROACH:** This game defies those who claim that speech is merely a frill and is never incorporated into the main play element of the game. Without speech, Kennedy Approach wouldn't be much of a game. As the air traffic controller re-

sponsible for six major American airports you have to listen to instructions from the pilots, clear runways, and talk them down safely. The first every genuine speech game for the 64

The Summer CES reflected the uncertain state of the computer and software industry in the States. Only three hardware companies exhibited—Commodore, Amstrad, and Atari. Software houses were also pretty thin on the ground. In total the show was a lot smaller than the monster event it has been in recent years. Smaller, for example, than our own Personal Computer World Show.

It would be wrong to assume that the picture was entirely bleak though. Many of the companies have been opting for other, computer dedicated shows, rather than being lumped in with, and to a certain extent overshadowed by, the hi-fi, compact disks, and pocket televisions in CES's main hall. One such company is Infocom — America's most profitable games software house in recent years. A spokesman told me "We no longer see the CES show as a major plank in our marketing strategy". Sad words indeed.

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THE WIZARD AND THE PRINCESS

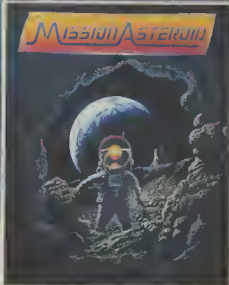
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TERRORMOLINOS!

Melbourne House's latest, exclusively previewed

Airport gone on strike? Lost yer passport and yer dosh? Hotel looks like a high-rise car park? Could be worse — you could be playing *Terrormolinos*, Melbourne House's latest and wackiest adventure. Here it is, previewed exclusively, just in time for those rainy summer days by the lelly.

All the jokes about the disastrous Spanish package tour are crammed into *Terrormolinos*.

The unfinished hotel, the sun burn, the problems at the airport — they are all here, plus a few new ones thrown in as well.

The game opens in a suitably exotic location — Slough. The aim is to get away from your two-bedroomed semi with its smelt of "cabbage and damp wellingtons" for two weeks in the sun, staying at the Hotel Excursio.

To prove that you survived your two week package tour you have to bring back ten holiday snaps.

Unlike Hampstead *Terrormolinos* has been completely re-programmed from the Leever Jones Quilled original.

Graphic screens have been added which appear when you take a successful snap shot or make a fatal error.



The screen shots featured on this page are pre-production screens taking up about 5K each. The final graphics will use a lot less memory than this though Melbourne House are confident of retaining all of the "mood" and most of the detail of the above.

Among the many perils, you risk being gored by a bull, buried up to your neck in sand, being poisoned, dying of heatstroke, losing an argument with a shark and being run over by a Euro-juggernaut.

Before you get to *Terrormolinos* there is quite a bit of adventure to get through. You've got to find everything you'll need for your holiday, some of which is hidden deviously around the house, pack, round up Beryl and the kids, and get a taxi to the airport.

If you take too long on your last minute preparations the taxi driver will get fed up and drive off.



Talking about the taxi driver, I can't resist giving you just one tip. Don't try to take the step ladder on holiday with you. If you do this you will get this comment from the tattie: "No way are you coming in my tab with that bleedin' step ladder!"

The snap shots also take a bit of working out. You need ten and you've only got twelve exposures on your roll of film so you can only afford two duds.

The successful adventurer will choose the right places to take the pics. Therefore quite a bit of exploring is advisable, perhaps even taking advantage of the sightseeing tours laid on at no extra charge by Kwikhof Tours.

When you take a snap it develops on-screen in front of you Polaroid-fashion. These snaps can then be reviewed one after another by typing in "Review Photos".

Not to be out-done by other programmers with impressive sounding names for their techniques like "landscaping" or "primary imbalance", Leever and Jones are taking the snap shot technique "Saurvision".

The game uses the percentage penetration scoring system — which is standard on most Melbourne House adventures.

We are looking forward to seeing the final version of *Terrormolinos*. Judging from the pre-production copy used for this preview it already looks like being a midsummer, silly season sensation.

Commodore User has twenty copies of the game to give away in an Exclusive *Terrormolinos* competition.

All you have to do is fill in the form below and tell us in not more than fifty words what you think would be a good, humorous subject for an adventure, and why.

The best suggestion will be presented with a copy of *Terrormolinos* by the authors at a slap-up lunch in London's best Spanish restaurant.



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.....
.....

Entries should be sent to *Terrormolinos* Competition, Commodore User, Priory Court, 30-32 Farrington Lane, London EC1R 3AU. Please write out your suggestion on a separate piece of paper. Entries must reach us no later than August 26.



The Partnership — Pete and Trev.

"Adventures are OK though Pete," pipes up Trevor, the double act now getting into full swing.

"Yeah, I suppose so. I can't handle Sherlock though. Why can't I solve Sherlock, Trevor?"

"Two reasons, Peter. One, you are not clever enough and secondly, I've got the computer."

The computer referred to is jointly owned, as is their copy of The Quill, the development system used by "the partnership" to write all of their games.

Leeper and Jones make no claims about state of the art programming techniques. None of the buzz words like "artificial intelligence" or "real time interaction" that usually pour forth from adventure writers with ease.

"It's the gags that sell the games," says Leever, summing up the partnership's strategy for selling software.

Leeper and Jones, or 'Pete and Trev' as they prefer to be called, can afford to make the odd joke at the expense of programmers. "They all wear snorkels and have spots" — as a programmer is the last thing that either member of the partnership would want to be referred to as.

Pete and Trev would prefer to see themselves as multi-media entertainers.

Hampstead and Terrormolinos aside, they have been involved in several "creative projects" since they met at Oxford University, in the '70s.

Most recently these projects have been a pop group called the Dave, a comedy act called the Three Roomies, and a satirical

documentary to promote the city of Slough called, hilariously, "Slough Now".

Devotees of fashionable London wine bars may spot the Three Roomies in cabaret this summer.

Having fingers in so many entertainment pies means that the duo need a constant stream of ideas to keep them going. An evening in the pub, a few glasses of Youngs bitter, and the likely lads are away — spewing out ideas like smoke from a factory.

"Write that one down," says Trev, nudging his girlfriend after Pete had just come up with an idea for a sketch based on the saying "poetic licence" which involves a policeman questioning a poet about reciting poetry in a public place without a licence.

All of this made it pretty difficult for the editor of this esteemed organ to get any sense out of the partnership. My one hope was this chat about ideas — so I grasped it with both hands. Where did the idea for Terrormolinos come from?

"I was cruising the Caribbean in the ocean-going yacht I bought from my Hampstead royalties when I thought 'I'll go to Bendorm'... while I was there I had the idea for Terrormolinos," says Trev.

Not a word of truth of course. He actually went courtesy of Intasun, on a seven-day package deal, and it wasn't Bendorm it was the Costa Brava.

By now we are in a restaurant and it is time to pay. Trev takes from his wallet a Donor Card and places it on top of the bill and hands it to the waitress.

Finally she persuades him that his Access card may be a better way to pay — but the smiles are quickly gone when she explains that she will have to phone up to check if his credit limit will cover the bill.

"I'm not sure if I can cover it, I've just paid for my holidays."

"Terrormolinos?" I ask. "You must be joking, Greece."

"Mad", "insane", "should be locked up" are the first phrases that spring to mind when you try to describe Messrs Leever and Jones, authors of the social climbers' adventure — Hampstead and, shortly to be released — Terrormolinos.

Spend an evening in the pub with the Hampstead boys and it is easy to see why.

"I think computers are boring," says Peter Jones, adamantly.

JUMP JET

JUMP JET AVAILABLE FOR

	DISK	CASSETTE
88PC MODEL ELECTRON	£17.95	£9.95
AMSTRAD	£13.95	£9.95
IBM 84	£17.95	£9.95
VIC 20 16K	£7.95	
C16	£7.50	

Every pilot has the dream of flying one of these unique and complex fighting machines. Here is your chance to do what few pilots have the privilege to try.

Depending on your skill, confidence and courage, you have the choice of remaining near the landing pad, learning to hover and land, or venturing higher to practise your approaches. When you think you have mastered these, then accelerate the Jump Jet into an attack fighter. Use the radar and range finder to seek and destroy the enemy, by launching heat-seeking air-to-air missiles. Beware! His radar and missile systems are as good as yours. Reckless pursuit is ill-advised: you must maintain a fuel level that will enable you to relocate and return to the aircraft carrier, executing the skills you have learned to achieve a successful landing.

You are now ready to proceed to the next skill level to face additional hazards, such as unpredictable swell and treacherous cross-winds.

Be warned, this program is not a toy or game. You will need to co-ordinate your hands, eyes and mind to successfully complete each mission. Do not hope to achieve in a short time that which took the author three years to learn as a Jump Jet pilot, and over a year to record on this computer program.

Written by
Vaughan Dow
Jump Jet Pilot



ANIROG



by Mike Pattenden

Well I'm in a holiday mood this issue. So I'm not going to be nasty to anybody. Not much I'm not.

I've won my first accolade. I'm proud to say Jeff Minter has made me wifly of the month in his wacky newsletter 'The Nature of the Beast' because I slagged off his *Mama Luana* game. Apparently if Jeff had his way reviewers wouldn't really be allowed to express an opinion, especially when it came to reviewing his stuff because it's so far advanced like psychedelic rock apparently. Well, all I can say is I have to recommend games that cost up to a fiver and I don't really feel I can recommend something that is an utter waste of self indulgence on the part of the programmer. I don't think I'm alone in thinking that Jeff has strayed away from doing what he's best at.

What I'm on the subject of people not getting on. I was chatting to Virgin programmer Charles Goodwin the other day and he let on that he didn't exactly see eye to eye with Legend supreme John Peel. Apparently *The Great Space Race* flop is a great source of amusement to Charles, particularly so because he recalls Peel got the idea for it from a thought that he voiced in a telephone conversation once. There's good news coming for all you poor *Space Race* suckers. Legend feels so bad about it that they're offering the game's owners the chance to purchase its raw game *Complex* at half price. Apparently Legend lost £200,000 on the *Great Space Race*, so who's going to be kind enough to give their money back charitably? Not disgruntled *Space Race* owners surely. Once bitten.

More disasters. Ocean man Paul Finnegan is tearing out his hair at the moment because, not one but two of his programmers have broken their arms. This explains the mysterious absence of Daley Thompson's *Superfest* and *Street Hawk* from the shelves. Has joystick waggling become a health hazard? If the games aren't finished soon Paul's threatening more breakages.

Disaster almost struck (ha!) CRL when a bolt of lightning hit their offices during the bad weather spell recently. Apparently they were playing around with *The Rocky Horror Show* at the time.

Over at Amiro's software retailers, manager Bob Williams was quietly adding up the day's figures when a gentleman walked into the shop. Bob paid no attention at the time. Now Bob, to put it politely (and you'll see why I've suddenly found my manners in a minute) is a little thin on top. So he's crouched there poring over his figures when there's a hiss and he gets a sudden sensation of damp on his pale. The guy has sprayed furniture polish on his shiny patch! Bob's retribution was swift and final and the jester found himself thrown into the road.



Curry'd Frank'n' Furtar

Back to Virgin for another snippet. A while ago the company wanted some hardware for their programmers — a new 64, couple of disk drives, monitor, stuff like that — so they phoned up good old Commodore. "Why don't you become dealers for us and buy at a discount," said the helpful sales souls. We only want a bit of gear Virgin explained gamily. "No, honest it makes sense. We'll send you all the information and forms." Days later the bumpf arrives and a slag-



gered Jeremy Cooke learns that he needs to fork out orders for £5,000 worth of stuff before he can become a dealer and reap all the promised benefits. Virgin went and bought it all round the corner.

I'm anxious to hear from anybody out there with tales to tell about good 'ol Commodore. I just know there's loads of you.

Well I've done my bit for another month so I'm heading for the sun, the sand, the sea, the surf, and the beach parties. I'm off to Cornwall. Anybody who spoils me walking along the front and taps me on the shoulder with a rolled up copy of *Commodore User* and says 'you're that gorgeous hunk from Hotshots, I claim my due' will win the chance to buy me a pint. See you down there.



On yer bike, Jeff

• HOT SHOTS COMPETITION •

Virgin's Gang of Five attempt an 'Incognito' act in anticipation of certain Hotshots exclusive revelations. Think of a lunnier explanation (not too difficult) and win this month's Screen Star games. Entries to: Carrier Bag Competition, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU.



IPS SPECIAL!

Sir Arthur is constantly getting into scrapes so here's some tips to help him through his two adventures:

ENTOMBED

There are a couple of particularly hard rooms which may well leave your Arthur entombed for good.

Level 5 In the room of gongs you must strike each one in the correct order with your whip. A musical note means you have it in the right order, and the right order is yellow, blue, pink, green and white. The final gong lifts up and you have the missing torch.

In the room of lava pools you must walk through in the right order. The first and second left to right make you visible. Using your whip to guide you walk into the third one. Still using your whip go through the first and you become visible once more. Walk through the second pool again and you're onto the next level.

You cannot see the trial room until you have all the scrolls.

Supplied by Andy Nicholls, Spalding, Lincolnshire and Kevin Young from Blyth, Northumberland.

STAFF OF KARNATH

Here's a quick spell guide to use when working your way around the castle.

Forthem—Dragons, ghosts, bats, Mad Monk, knights vampire, flying axe, frog, baby troll, witch

ibrahim—Big troll, green spider, pot of
pansies

Thrombin — Magic carpet

Umphallus — Shield

Stoly — Force field

Yerbas — Skeleton

Knossus - Python

Baracade — The Obelisk.

Menhir — The Slott

Aeolus — The Flames

In the Timeless Room to get the piece of parchment over the bed, hit the carpet with the Throbin spell and step onto it. It shakes and levitates.

To get the piece of pentacle in the laundry room go to the Upper Guard Room and shoot the cross with the Thorbin spell to make it turn blue. Hit it again with the Unghalus spell to make it fall down. Take it to the South Tower Lower and the vampire lets you into the Laundry room. Rush in and out as fast as possible before the vampire gets you.

Wall in the Waiting Room Watch the mantle-piece.

Wait to the left-hand side of the Morning room and, if fired repeatedly the Ibrahim spell will knock the flower pot off the table.

Supplied by R. Briar from County Antrim, N. Ireland
R. Cleave of Bridlington, N. Humberside.

MAP KEY

- | | |
|-----------------------------|----|
| D = Object | |
| C = Computer | |
| P = Pickpockets | X0 |
| V = Vendromail | X7 |
| S = Start | M2 |
| D = Doctors | C5 |
| CR = Control Room | F2 |
| JB = Jail Bike | N2 |
| UR = Unhappy Robot | X8 |
| HR = Hello Reactor | C7 |
| RR = Rustling Robber | R4 |
| WG = Welding Geler | E9 |
| ES = Eye Shields | E3 |
| TB = Time Bomb | L6 |
| RM = Robot Manual | B7 |
| CG = Guesser Counter | C8 |
| RH = Real Herring | P9 |
| Sc = 5 credit coin | 92 |
| PC = Pleasure Circuli | 96 |
| Malefic Damage | X0 |
| Danger | L3 |
| Low Pressure | L8 |
| Hole In ship to outer space | X0 |
| Very Low Pressure | M8 |
| Go no further | X8 |



Here's a map and seven tips for all sent to us by Paul Gooch of Halstead Essex

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- 3) To get the jet bike, N2, shoot the object moving left to right. It's best to ricochet it off the block.
- 2) To make unhappy rebel happy, give it the pleasure circuit U6, and get the Bupe card.
- 3) Give Bupe card to docile, C5 and get the circuit board.
- 4) Give vendromat, V7, 5 credit coin P2, and get fuse and 1 credit coin.
- 5) To get 5 credit coin go through P1, P2, then move to the far right. The coin will then bounce up to the top and you move it to the left to get it.
- 6) All the objects in the ship have to be used in order to get into the control room, F2.
- 7) Give the cassette of Sorcery to the machine at A6.

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• THE • HAPPY • HACKER •

HUGO GOES HACKING

This is the book that started it all, I suppose. Hacking first hit the headlines towards the end of last year, when person or persons unknown managed to gain access to the Duke of Edinburgh's account on Prestel. National newspapers decided that this was a story worth following and articles along the lines of "Just how safe are our computer networks" began to appear like they were going out of fashion.

It was around this time that someone calling himself Hugo Cornwall was approached by Century Publications to write a Hacker's Handbook. Hugo Cornwall isn't his real name, by the way. I don't know where the Hugo bit comes from, but Cornwall is to do with Pirates of Penzance, geddit?

Packed into this book's 150-odd pages is a wealth of information for the would-be hacker. First, the expected chapter about what a hacker is, what makes him do it, and how the word "hacker" originated.

Then comes the juicy stuff, starting with a mention of one of the first TV hacks in this country. Remember, if you will, the first Micro Live programme on BBC1. It was a special hour-long edition to clear up after the first broadcast of The Computer Programme. The producer decided that a live demonstration of Telecom Gold would be fun, but he seemed to underestimate a hacker's desire for notional fame. The password for the program was BBC — not impossible to guess. And when the presenter logged on, a small but now famous rhyme was waiting for him.

There are some interesting sample printouts from various hacking bulletin boards in the book, including a fairly comprehensive list of more phone numbers. Problem is, though, they're all in the States. There's a good section on the inside of Prestel, and a useful list of some commonly-used passwords.

This book is packed full of information. It's not just a list of the author's exploits — it actually says what he did and how it was done. For someone who really wants to understand the world of the hacker, this really lives up to its title. Good value, and highly recommended.

- The Hacker's Handbook
- by Hugo Cornwall
- Century Communications
- Portland House
- 12-13 Gresham Street
- London W1
- £4.95
- Recommended

THE INNER CIRCLE

In 1981, a group of around fifteen top American teenage hackers formed themselves into a club called *The Inner Circle*. Bill Landreth, one of the founder members, has now retired at the grand old age of nineteen. His decision was partly voluntary and partly suggested by the FBI. He was arrested and subsequently convicted for hacking, under the affiance of wire fraud.



Out Of The Inner Circle is Bill Landreth's attempt at telling all. His book is the top selling computer book in the States at the moment and is riding high in the national non-fiction charts.

The micro enthusiast interested in becoming a hacker will probably be rather disappointed after ploughing through the 230 pages of this book, though. True, it's the story of Bill's (alias The Cracker's) life behind the keyboard, but there's a shortage of hard facts.

Unlike the other books mentioned on this page, this one has no illustrations or tables. It's all solid chunks of words. You will certainly learn about computers, and how a hacker thinks, but little that will help you in your quest to emulate the author. And let's face it, that's what most people will buy this book for.

The best part for me were three paragraphs comprising the Inner Circle's code of conduct.

If you are actually in charge of a computer network, you may appreciate the advice on how to keep the system secure. For the overage reader it's a vicarious way of getting the hacker's experience.

- Out Of The Inner Circle
- Bill Landreth
- Mikrossoft Press
- available from Penguin
- Books stockists
- £8.95
- Reasonable

NETWORKS REVEALED

I'd suggest that this offering be renamed *The Networks Handbook*. Just about every system in the UK gets a mention, but little more.

The main advantage here is that the book is specific to the Commodore 64, concentrating mainly on systems that are available to the 64-and-modem owner.

There are details on many modems that you can use, including the Pace Nightingale, Buzzbox, Miracle Technology, Tandata and Telemad 3. Unfortunately, not all the information is as up to date as it could be. The Pratek modem, for example, is no longer.

The section on Bulletin Boards is good and a list of telephone numbers is included, though you'll almost certainly have most of them already.

Telex — that's Ceefax and Ordo — also get a mention, though the systems have not been penetrated by hackers up till now. You don't have an individual account on a Telex system, so there's no way that you can access someone else's area. However, updating of the system can be done via a modem and I await the day when someone manages to change the pages of Ceefax undetected.

Prestel is probably the most widely known network around, and is fairly well explained. Hamelink, the world's first home-operated bank/building society comes out quite well.

As a textbook on communications and hacking, this is a reasonable effort.

- The Hacker's Handbook
- Geoff Wheelwright and Ian Scales
- Langman
- Langman House
- Burnt Hill
- Merlaw, Essex
- £5.95
- Good

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INTO THE VALLEY



e Adventure Adver

Fancy yourself as a quick-fire sleuth, or maybe a British agent with the nounce to defuse nuclear bombs? Looks like this month's crop of adventures are turning their noses up at the classic D and D scenario — but there's plenty of brain tangling to get to grips with.



Secret documents in *The Fourth Protocol*. Watergate was never like this

ADVENTURE NEWS ● ADVENTURE NEWS ●

● The launch onto the UK market of low cost image digitisers for the 64 (and 128 compatible) is certain to herald a new era in both commercial and home-written graphic adventures. The Print Technik Digitiser marketed by CRL is capable of reproducing pictures from the images produced by a video camera or recorder.

As CRL spokesman David Cross-weller explained to the *Valley*, the initial result is a picture made up from four shades of grey resembling a black and white photograph which can be retouched using a lightpen or graphics tablet and further enhanced by replacing each and every shade with any of sixteen colours. The final version can be Saved to disk.

This technology obviously lends itself to the development of graphic adventures making a library of detailed and realistic screens — perhaps on the flip side of the disk, like the new version of *The Hobbit* — and digitisers will doubtless appeal to adventure authors who have in the past shied away from the lengthy chore of creating hi-res graphics.

The CRL product is priced at £149.95 and will debut at next month's Personal Computer World Show in London.

● A micro adventure based on Douglas Adams cultish hit *The*

Hitchhiker's Guide to the Galaxy has won the WH Smith Game of the Year Award — but Infocom's £30 disk import is currently the only version available for the 64, and Commodore UK have scratched plans to release a disk version for the Plus/4.

● Apparently inexhaustible Brian Howarth, whose brilliant *Gremlins* is one of Adventure International's biggest-ever hits this side of the pond — having knocked off a trio of welcomed C16 Mysterious Adventure conversions (in his lunch break — is now hard at work crafting an all-new, animated graphic version of *Midwinter*, due out later this year.

● Can we work it out? The Feb Four (meaning, for the benefit of the sub-20s, The Beatles and not the founders of the SDP), flower power, kaffens and loss sticks make an evocative reappearance in *Beastie Quest*, a Quill-aided text adventure mastered by Garry Marsh and just out on the Level 9 label at £9.95. Full review next month. Hang in there.

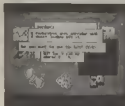
● British horror author James Herbert will follow in the footsteps of Arthur C Clarke, Frederick Forsyth and other contemporary authors whose bestsellers have gone micro when he and his revengeful rodents try to gnaw their way into adventurers' affections with *Rats*, coded by Fireways and due out from Hodder & Stoughton this autumn.

● Anirog's chirpy Clere Neil has vowed to the *Valley* that the mammoth *Soul Gem of Martek* still is on the stocks for release by Christmas. Up for a place in the heavyweight adventure book of records, SGM runs to 150K and has to be loaded in six parts — but is still expected to sport a value-for-money price tag of £39.95.

● Also bubbling under is the eagerly-awaited 64 version of *The Illustrator*, a menu-driven marvel for incorporating full-colour, hi-res graphics into Quill-generated adventures. Gilsotti's Tim Gilberts has promised the *Valley* an early hands-on test, so watch this column for exclusive sample screen shots plus a chance to win one of three copies of *The Illustrator* in an easy to-unter competition.

● Level 9 follow up the success of *Emerald Isle* with another title aimed at the newer adventurer, *Red Moon* combines a 200-location graphics quest with role-playing features that allow the player to cast spells as well as enter more conventional inputs.

● US Gold spin-off All-American Adventures have at last released *Exodus: Ultima III*, the first in a series of arcade-cum-graphic adventures — but like others to follow, it's only available on disk at the wallet-numbing price of £19.95. Read next month's *Valley* to learn whether it's worth it.



First-rate mixture of text and graphics

Playing Protocol

There's yer actual graphic adventures, yer arcade adventures, and yer action-adventure games. Just to confuse the cross over even more, Hutchinson (or to be precise, programmers Electronic Personal Company) have come up with *The Fourth Protocol*, an episodic stroll through the labyrinth of modern espionage based loosely on Frederick Forsyth's bestseller. It wears a price tag of £12.95, or £15.95 on disk.

In the first part of the game, you're confronted with a screen of icons which allow you access to MI5's central computer (no big deal, judging by some recent events), check files, use three VDU's, make phone calls and complete other tasks in order to build up your knowledge of Plan Aurora — a scheme by them damned comune bedwetters to transmute the good old U of K into a much fallout fodder. Cheerful theme for a jolly adventure, eh?

As true Brit agent John Preston, your mission is to unravel the plot, survive an arcade interval (why do they do it?), and finally apply the gems of knowledge you've acquired to the tricky business of defusing a nuclear bomb.

The Fourth Protocol will appeal most, perhaps, to those who aren't yet committed to mainstream adventures. The graphics really are first-rate — the zoom sheets in particular are very realistic — and there are some neatly done sound effects and other refinements to enjoy. The arcade element here — as to *Enter the Dragon* and *Spirits of the Stairs* — will be tolerated but not enjoyed by some; it could have been liquidated with no loss of overall enjoyment.

Medieval evil

First in a trilogy of atmospheric text adventures, *Castle Blackstar* was originally published by SCR for the Spectrum about a year ago, and the only pity is that lovers of traditional hokum have had to wait so long for this excellent (and cheap) 64 implementation courtesy of CDS at £6.95.

After a reasonably fast load, it's back to the medieval world so beloved by D&D groupies, involving a quest for a mystical orb with plenty of trials and traps in the way of exploring the 200 locations. The descriptions are nicely done, the parser will cope with more than fundamental verb/noun inputs, and encouragement is given by a constantly updated score readout.

In the absence of diving (and sometimes distracting) graphics, a good text adventure must have that something extra — and this title has it in the form of the humour and irony which colour many of the responses your bumbling will trigger.

Full marks to CDS for bringing *Castle Blackstar* to the market place at a time when shoot-em-up/sports simulation games are a safer bet for software houses. And a gold star for offering a personal hints service, you

will, believe me, get stuck — but enjoyably so.

Up The Amazon



Waiting for the Amazon — or has rain stopped play in the final Test?

Unless you win the pools (or are a truly powerful wizard like me, ree-bee) it's not every day that you get a chance to boot up a tasty import that costs a cool £19.95. *Amazon*, created by Michael (The Andromeda Strain) Crichton and coded by David Durand and Stephen Warady, hints at what life must be like for people who eat greasy



Graphics to make even Terzan smile

figs and cream for breakfast and can afford to buy adventures at this price without at least visibly flinching. It comes from the States on the Trillium label — renamed Telarium for some obscure legal reason, and marketed here by W H Smith's own software arm.



Watch out for the multicoloured intruders

The point is that although it costs as much as a Harrods' meat pie, you are getting tremendous value for money. A beautifully packaged, documented and realised graphic adventure, *Amazon* features some truly original and amazing sound and visual effects (such as running on a TV satellite broadcast with the joystick) to pep up the 'static' screens and a particularly inventive and visually stimulating line in challenges to your intelligence and initiative.

Some idea of *Amazon*'s sophistication and complexity can be had from the fact that the concept pack it comes in (something like a double LP sleeve) is

• CHARTS •

1	(1)	<i>Gremlins</i> (Adventure International, G/A, £9.95)
2	(3)	<i>Emerald Isle</i> (Level 9, G/A, £6.95)
3	(8)	<i>Tir Na Nog</i> (Gargoyle, G/A, £9.95)
NEW 4	(-)	<i>Subsunk</i> (Firebird, G/A, £2.99)
5	(7)	<i>Jewels of Babylon</i> (Interceptor, G/A, £9.95/£11.95 disk)
6	(5)	<i>Gremlins</i> — C16 version (Adventure International, T/A, £7.95)
7	(2)	<i>Black Crystal</i> (Mastervision, T/A, £3.99)
8	(-)	<i>Classic Adventure</i> — C16 version (Melbourne House, T/A, £5.95)
NEW 9	(-)	<i>The Helm</i> (Firebird, T/A, £2.99)
10	(6)	<i>Velnor's Lair</i> (Atlantis Gold, T/A, £2.99)

Budget labels continue to dominate our chart with no fewer than six of this month's Top 10 selling at under £7, making the point that today's price-conscious adventurers are happier with titles that are hard on the brain but easy on the pocket — though Guano & Co will defy anyone to knock them from the top spot for the second month running, and word-of-mouth recommendation probably explains *Emerald Isle* creeping back up one place.

British Telecom have surprised everyone (perhaps even themselves) with the success of their pennywise Firebird label, and their two new superior Quill-aud titles reviewed in *Valley* last month already seem to be ringing the right bells and are August's only two new chart entries. Software-starved C16 owners show their thanks to Adventure International and Melbourne House — but it's goodbye for now to Upper Gumtree and the nice but pricey Hobbit disk.



A whole new world awaits you and your 64. The world of Prestel, Micronet, Viewfax, Homelink, Citiservice, Compunet [Commodore's own database] etc. This is the world of product reviews, mainframe games, home banking, business information, commodity futures, armchair shopping, real time conversation, electronic notice boards, helpful tips, ICPUG, news, Telex-Link, Mailbox, Chatline, Gallery etc. This is the world of telesoftware, with programmes to download into your 64 and save to disk or tape. Many telesoftware programmes are provided free of charge or at nominal cost.

Dialog with over 600 massive databases on call and almost unlimited information on just about any subject is accessible from your 64, together with BT Gold, Easylink, One to One etc., with electronic mail, business services and telex facilities.

You can link to Bulletin Boards in your area for local news, club news, letters, jokes, poems, helpful tips, etc. It's a whole new experience.

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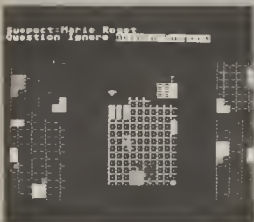
001

home for a brace of twin-sided disks and a wedge of papers which alone will take you a few hours to study and digest.

Amazon wouldn't make a good choice for even a wealthy novice, but if you've already graduated, you should be able to tackle this very expensive — but justifiably so — treat.

Zinderneuf sleuth

Perhaps the canner way to pigeon-hole *Murder on the Zinderneuf* is to say that it vaguely resembles Sherlock with cartoon. Purists will consider it at



Murder on the Zinderneuf — "you ain't gonna pin this rap on me", with no butter to nail, you've got your work cut out

During the process of deduction, you'll have a lot of fun feeling the collar of the avuncular Brh-le-thumper Jeremiah Folmuh, society gal Felicity Sucrose, ventriloquist Aldo Sandini and the other passengers — especially since you may choose, menu-style, to interrogate them in a forceful, seductive, polite, friendly or naïve manner.

least one stage removed from a true adventure, but it's that very difference which makes it interesting.

The scenario places you in a dirigible crossing the Atlantic with a motley assortment of 15 suspects to question and a homicide to solve in just 36 real-time minutes. This you do by using the joystick to move your spritely 'tec around the colourful scrolling plan of the airship's public rooms, where you will encounter obstacles and significant items and can question those you meet.

The gimmick is that you may choose to adopt the particular characteristics of one of eight different detectives, ranging from the pearls and ravenet Miss Agatha Marbles to the rumpled Lieutenant Coccinatto of NYPD. Each has a different sleuth rating and thus, and other factors, sees to it that the solution is not only different but differently arrived at each time you play.

There are also clues to be discovered, red herrings to ignore and much else to be enjoyed before the climax of the final accusation. Then the police will seize your suspect and ransack his/her room. If you guessed right, the murderer will confess. But if you're wrong — well, who wants to be stuck in an airship hovering 5,000 feet over a lot of water after making a faux pas like that?

Murder on the Zinderneuf comes with an excellent play-book that explains the game particularly well, describes all the characters involved most amusingly, and includes a useful floor plan. It's very different, very addictive and, at £9.95 or £12.95 on disk, one of the cheaper top-drawer American adventure imports.

COMPETITION

It is no secret that espionage is giving a shot in the arm to slumping summer software sales, with *Beyond's Spy Vs Spy*, Domark's *A View to a Kill* and Hutchinson's *The Fourth Protocol* all grabbing enough of a share to keep their publishers in Russian tea.

Naïveté shy about milking a good thing, the games-makers are fanatically searching book publishers' back-lists for other conversion fodder, and it looks like a Len Deighton title could be next for the treatment.

This month you can win one of three copies of *Classic Adventure* from Melbourne House — in either 64/128 or C16 format — by simply naming the nameless ragged British agent who's the central character in Deighton's spy novels; that's right, because he was only given an identity when the *Icepress File* was made into a movie starring Michael Caine.

Write in the name on the coupon below, or on a postcard, add your name and address and the titles of your three currently most favourite adventures — then mail it right away to the address shown at the bottom.

● June winners were Mr M Green from Lincolnshire with *Lords of Midnight* as his answer and Paul Doherty from S Glamorgan who got the most words in the Level 9 comp. Prizes on their way!

The spy played by Michael Caine was named

Your name

Address

My three favourite adventures are:

1.

2.

3.

Send your entry to ICPRESS COMPETITION, Commodore User, 30-32 Farringdon Lane, London EC1R 3AU.

DIY Graphics

I've only had a few minutes to skim through Phil Cornes' two latest Screen Shot titles from Dorling Kindersley, but *Commodore 64 Graphics Book 3* and *Book 4* at £5.95 each appear to give all the information, and more, that programmers wanting to incorporate hi-res and (static or animated) sprite-based graphics in their adventures could hope for.

Both books present plenty of really useful routines, including machine-code loaders to give a fast and professional result. The large format presentation and colour on every page make these guides a pleasure to study. At £5.95 each, you couldn't make a better purchase if you're serious about making the most of your 64's good looks.

C-16 Adventure Special

by John Ransley

So you thought the C-16's measly memory counts it out as a machine for adventurers? Not so. We've rounded up the best of the C-16 adventure crop, for both the beginner and the experienced puzzle 'n' penit buster.

How do you peck the Hall of Mists, Elvenking's dungeon and the gremlin-esque Kingston Falls into your Commodore 16's modest memory? Easy! Just put the program onto a plug-in cartridge, or put the genius of Brian Howarth or John Jones-Steele to work on refining text compression techniques to the point where (albeit at the expense of pretty graphics) it really is possible to cram a creditable version of **Classic Adventure** or **Grenline** into your C16 (or, come to that, Plus/4).

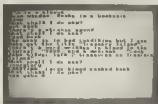


Scott Adams Classics

One is almost duty bound to begin this round-up of C16 adventures currently on offer with a look at the creations of the ubiquitous Scott Adams who, almost single-handedly, proved that there was intelligent life after Space Invaders.

But it's sad that Adams' earlier works — at least in the text-only versions now out on C16 cartridges from Commodore, price £11.99 each — are beginning to show their age.

With such lack lustre software support for the C16 (possibly the most underrated low-price micro of all time in my book), perhaps one is simply meant to be grateful that Commodore even bothers to market the modest trio — but these implementations of



Pirate Adventure, **Atomic Mission** and **Strange Odyssey** lean a little too heavily on the Adams' name [Pirate Adventure was actually written by Scott's wife, Alexis] for their appeal.

In none of them has any attempt been made to add a vestige of visual appeal to the oh-so-basic screens by making even a little imaginative use of the C16's excellent colour and sound facilities. No scene-setting title pages, no mini-themes to heighten the atmosphere, not even a stab at setting out the text in an interesting way. Staring at the average sauce-bottle label might prove more stimulating.

That said, the entertainment to be had from almost any Adams title is still to be found below their unwitting surface, even if it has proved beyond the authors' capabilities to add a few good looks.

That wring apart, **Pirate Adventure** in particular makes a good choice for the novice adventurer, comprising as it does fewer than 30 locations but a great many more knuckle-whitening puzzles: beginners will soon find themselves wrestling with the magical rum, the classical anchor problem [the parrot may have good tidings] and those sneaky crocodiles on their way to discovering the treasure that's the reward for solving some gloriously perverse anagrams.

A couple of rungs up the ladder of difficulty, **Strange Odyssey** will have you backpacking around a strangely sterile planet [rumour has it, the prototype for Milton Keynes] in a quest to find several items to help achieve your understandable ambition to escape. But you'll soon discover a snag-ridden jungle, an ambivalent ice hound and a rewarding museum and many other elements to keep you guessing.

Atomic Mission has more or less the same level of difficulty. The challenge is to save the world's first automated nuclear reactor from destruction — and wonder why it was built in the first place.

All three adventures come with a very clearly explained and illustrated playing guide to get the new adventurer on the road. But in terms of presentation, they're way behind the times [inputs are limited to verb/noun, and even then the logic has some irritating blind spots] but the convenience appeal of instant play cartridges can't be denied.

PUZZLEABILITY:	***
PRESENTATION:	**
PLAYABILITY:	**
VALUE FOR MONEY:	**

Melbourne Classic

There can be few adventurers who don't occasionally pay silent homage to Crowther and Woods, the Americans who in 1975 developed the world's very first computer adventure, which in turn borrowed heavily from Dungeons and Dragons, the role-playing board game that had made its debut a year earlier.

Of the numerous versions which C&W's Adventure spawned, two only are generally recognised by the cognoscent as being wholly worthy interpretations of the original.

One is Pete Austin's version for Level 9, Colossal Adventure, and the other is John Jones-Steele's reworking for Melbourne House under the title **Classic Adventure** — of which a version for the C16 has, happily, just been released at £5.95.

The player first finds himself on a winding road near a stream, but soon a hut comes into view, where a lamp, keys and refreshment await. And you'll need them all to outwit the axe-throwing dwarves, the covetous pirate and the avuncular troll in your bid to collect the precious gems and many other hidden and guarded treasures that await your detection.

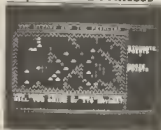
Direction commands can be entered as a single letter, and the input parser works on only the first four letters of the verbs/nouns you enter. This can

occasionally have unnerving results; typing REST, for example, triggers the response 'Press play on tape' because your input has been mistaken as an instruction to restore a saved version. Get out of this by hitting Run Stop. There's a score and help feature.

Criep, logical, often maddening but always entertaining, *Classic Adventure* is one of the best and cheapest of the crop for the C16.

PUZZLEABILITY: *****
PRESENTATION: ***
PLAYABILITY: ***
VALUE FOR MONEY: *****

Spellbound Princess



Also from Melbourne House at £5.95 comes *The Wizard and the Princess*. This Clifford Renshaw title will be fondly remembered by Vic Pioneers because it was for yonks the only thing close to a decent arcade adventure available for that micro, which wondrous feat was accomplished by loading it in separate parts. The new, and much improved, C16 version also uses this trick.

There are five levels which autocload in the correct sequence as you successfully complete each part of your quest — or you may choose instead to load them in any order you choose.

The challenges include a mini graphic adventure, a couple of simple arcades and 3D-style maze game. Find the wizard's castle, defeat the guardian dragons, negotiate the labyrinthine passages and rescue the princess — and the rest of the day's your own.

The whole shabang can be listed as when you've exhausted its play value you have an opportunity to pick up some programming know-how.

PUZZLEABILITY: ***
PRESENTATION: *****
PLAYABILITY: ***
VALUE FOR MONEY: *****

Four Howorth

Myrioth

How come that one-man adventure factory Brian Howorth finds enough

hours in the day to produce all those titles for Adventure International and write C16 versions of four of his most popular: *Mysterious Adventures*? The simple answer is that when Brian was converting a number of 84 titles for the Vic, Channel 6 Software his original publishers hit trading difficulties last year. By the time all that sort of itself out and Adventure International bought out Channel 6, the C16 was in the shops — and Al shrewdly invited their new star author to tweak his conversions for the C16.

So how good is the quartet of text adventures that is the result? In *Ten Little Indians* your adventures begin on a train to the country mansion of a fabulously wealthy eccentric who literally poured all his money into the gold furnace just before his death. The key to its discovery is in the ten worthless figurines you must first collect — while guarding your own life, possibly from the major's jealous nephew.

Ray Bradbury fans who enjoyed reading *Something Wicked This Way Comes* (crafted into an excellent film by Walt Disney) may recognise the scenario of a surrealist fair used in *Circus*, where everything is what it's not and nothing is what it seems. Serves you right for running out of petrol on a deserted country road.

There's a science fiction favour also to *Escape from Pulsar 7*, where you take on the role of a steller trader who makes the mistake of freighting a strange creature from an intergalactic zoo which soon starts growing faster than Philip Mitchell's bank account.

Back to some Orwellian fun with *The Time Machine*, where gossip about strange lights and weird noises coming from the home of a whirly scientist — not to mention the figure in full armour seen wandering in the grounds — set you off on a quizzical quest in which time warps whip you through more centuries than Freddie Trueman.

All four titles rely on a fundamental verb/noun parser, but the accepted vocabulary is more imaginative than most and help, score, save and inventory commands move things along.

PUZZLEABILITY: *****
PRESENTATION: ***
PLAYABILITY: ***
VALUE FOR MONEY: *****

Microdeal cheapies

Cheapest among C16 titles are *Williamsburg Adventure* and *Mansion Adventure* from Microdeal, both priced at £3.99. I gave up trying to load my copy of *Mansion* after the sixth or seventh attempt but *Williamsburg* burst into life quite happily, eventually, and I found myself in a small mid-West colonial town trying

to track down a golden horseshoe while dodging the hazards of evil spirits, ghosts, a murderous butcher and a terminal maze. Input is simply a verb/noun affair and you're given occasional bits of Help Instructions are virtually non-existent.

One problem, I can't figure out a way of saving a game; one star deducted for that.

PUZZLEABILITY: ***
PRESENTATION: **
PLAYABILITY: ***
VALUE FOR MONEY: **

Text-only Spidermon

Another part of the Scott Adams empire is looked after by the UK arm of Adventure International, who've just released a trio of 84 hits in C16 text-only versions, *The Hulk Spiderman* and *Sorcerer of Claymorgue Castle*. Price is £7.95 each.

All three offer a moderate/difficult level of challenge. *The Hulk* and *Spiderman* come with a first-rate 16 page leaflet explaining the scenario, characters and rules of play — though not, sadly, the colourful Marvel comic that more effectively set the scene for the 84 versions. Why not?

The *Hulk* represented a new departure for Scott and most people who have worked through both this title and its successor would agree that *Spiderman* represents a great improvement in playability.

The *Sorcerer of Claymorgue Castle* got a best adventure of the year award, which recognition perhaps had more to do with this adventure's intrinsic quality than its chart success (and quite right too). So you can think of it as a kind of art movie that Cannes loved but which bombed at the Skegness Odéon.

In this you take the part of apprentice Beswick, entrusted by Solon the Master Wizard to retrieve the 13 stars of power hidden by zerk-wicked Vlanth.

Nene can be fairly compared with the 84 versions, with their attractive full-colour graphics, but thought of as text-only 'originals', they're all very diverting and virtually faultless.

PUZZLEABILITY: *****
PRESENTATION: *****
PLAYABILITY: *****
VALUE FOR MONEY: *****

Finally, Trevor Hall is rumoured to be preparing a special C16 text-only version of his classic *Twin Kingdom Valley*. Might Melbourne House follow suit with *The Hobbit*? After all, Tolkien's version was text only, too!

THE SOFTWARE TOP 20

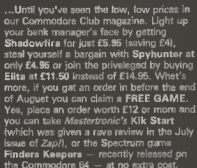
COMMODORE 64

Title	Publisher
1 Way of the Exploding Fist	Melbourne House
2 Soft Aid	Softaid
3 Dambusters	US Gold
4 Shadowfire	Beyond
5 Pitstop II	US Gold
6 Impossible Mission	US Gold
7 International Basketball	Commodore
8 Theatre Europe	PSS
9 World Series Baseball	Imagine
10 Kick Start	Mastertronic
11 Entombed	Ultimate
12 Alrwolf	Elite
13 Rocky Horror Show	CRL
14 Spy Hunter	US Gold
15 Summer Games II	US Gold
16 Pole Position	US Gold
17 Raid Over Moscow	US Gold
18 Bruce Lee	US Gold
19 Cauldron	Palace
20 Everyone's a Wally	Mikro-Gen

GENERAL CHART

Title	Publisher
1 Soft Aid	Softaid
2 Way of the Exploding Fist	Melbourne House
3 Dambusters	US Gold
4 Elite	Firebird
5 Shadowfire	Beyond
6 Softaid	Softaid
7 Dun Darach	Gargoyle Games
8 Starion	Melbourne House
9 View To A Kill	Domark
10 Alien 8	Ultimate
11 Tapper	US Gold
12 Knight Lore	Ultimate
13 Atic Atac	Ultimate
14 Summer Games II	US Gold
15 International Basketball	Commodore
16 Jet Set Willy 2	Software Projects
17 Five Aside Football	Anirag
18 Rocky Horror Show	CRL
19 Herbert's Dummy Run	Mikro-Gen
20 Theatre Europe	PSS

(OR DISK!)



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Mr. Software

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These great awards... again this month. The... Summer Games, the sport... Epyx with unbelievable gra... versus Spy II — the... adventures and the best... value ever — Kennedy Approval... Friendly Ken the helpline guy took a trip to Manchester to bring you an exclusive report from Ocean Software about their Frankie Goes To Hollywood game.

Clb owners are also included in the fun with two new offerings from Zenith Graphics: Super Gien of a makes an appearance in the port, Commodore 64 does Jan Williams author of the Beaks Trilogy with a new game on the English Software label.

Sports fans continue to get supplied with the software houses with Epyx's Aside Soccer from Amiga and Inter National Tennis from Commodore.

It just goes to show that it is really worth it to be in the know about the latest hot Commodore games. You had better not miss Screen Scene every month.

If you get this far you must find your way into the Pleasure Dome, but this can only be done if you have completed all the arcade screens and picked up all the night life and games in the night zone. Tricky huh? All this is, of course, accompanied by the strains of Frankie going from the telly screen. Surprisingly the music is not out of standing; the only thing I recognised was Two Trills.

The big question is will The Pleasure Game be as big a success as its musical counterpart. At ten quid it's a little over the odds for a game, but then there's a lot to it and it's very well put together. I predict chart topping success. **RM**

Presentation: **★★★★**
Skill level: **★★★★**
Interest: **★★★★**
Value for money: **★★★★**

castle in pairs or out at control. Horby stars. If Rupert bumps into them he flops over and loses a life. Expressed here as taking a tumble, losing lives is far from brutal for this game. Hitch a ride though on a passing bird or plane to get out of trouble.

It doesn't sound all that special so far does it? You've got to see the graphics. What we have is a fully animated Rupert walking around the screen. Just like the real thing and twice as cute. Every now he hops over a toy soldier or bounces up some steps he scold liles around his neck. Colours are bright without being garish and details are well

SCREEN STAR

Spy Vs Spy II
Spy Vs Spy II
Commodore 64
Beyond
Price £9.95/cass

The black and the white spies in Spy Vs Spy had to pit their wits against each other in a race around an office building to find some secret documents before making good their escape in an aeroplane.

Each spy had to set booby traps for his opponent such as a bucket of water above a door, or a bomb in a drawer, to stop him getting the documents first.

It was all fairly tongue in cheek and very much in the tradition of the cartoon strip from Mad magazine on which it was based.

As a two-player game it was steeped ahead of anything that had gone before.

The good news is that the sequel will shortly be available and, as an added bonus, version one will be given away free on the 'B' side.

Spy II takes up the story where version I left off. Both spies got onto the plane but have to abandon it over a group of islands miles from anywhere.

The opening screen shows them descending parachutes open, onto one of the islands.

The spies are searching for a missile left behind by the enemy. It is in three parts, hidden throughout the island. To locate it you will first need to find some other items: a map, compass and a shovel to dig it up.

As in Spy I you are racing against time as well as the other spy. But there is an added urgency on this island — it's got a volcano.



When it goes off the whole screen shakes and the island fills with lava, ending the game for both spies.

When you find the missile you have to defuse it and take it to your submarine to escape.

To stop your opponent getting the missile first there are a number of traps that you can set for him. These are just as much fun as they were in the first game, particularly the coconut bombs that you make using the gasoline from the wreckage of the seaplane.

You also have a rope to set snares for your opponent — but watch out you don't step into it yourself as you will end up hanging from a tree if you do.

There is also a gun hidden somewhere on the island giving a major advantage to the spy who finds it first.

The game has several play options. You can choose to play a multi-island game where the missile parts are hidden on several islands necessitating a swim in the shark-infested waters. You can also choose to



have you get every sub parked conveniently beside the island or, for the advanced player, have it appear at random somewhere in the waters surrounding the islands.

Spy II is a bigger game than the original. It uses the same spin screen technique and has a selection device but the complexity and game play is much more.

At £9.95 for Spy I and Spy II this has got to be the best value new release of the year. **LS**

Presentation: **★★★★**
Skill level: **★★★★**
Interest: **★★★★**
Value for money: **★★★★**



defined without cluttering the screen. I enjoyed controlling Rupert as much as I enjoyed driving the prehistoric unicorn off the edge of the mountain in Grog's Revenge. Buy this game, you must meet Algie and Berna they're the wettest friends a guy could have. So

Buy this game and you'll go far. For Rupert is this month's Screen Star. **MP**

Presentation: **★★★★**
Skill level: **★★★★**
Interest: **★★★★**
Value for money: **★★★★**

FIVEA-SIDE FOOTBALL



Penalty shoot out feature



Fast moving characters leave competition standing.

Ideal family entertainment.

Voice Master generated speech.

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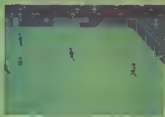
Amazingly realistic animation.

Speed and skill the essence of the game.

Ingenious method of settling arguments.

Demanding challenge at all three skill levels.

Enormous fun from start to finish.



CBM 64
64 Cassette £5.95
64 Disk £8.95

ANIROG



M.U.L.E.
Commodore 64
Ariolasoft
Price £11.95/cass
£14.95/disk

Another cerebral game of the management/strategy persuasion but a cut above the 'Run a Banana Republic' style of presentation. You don't get an instruction leaflet but a player's guide, which is quite a hefty tome when compared with the normal brief run-down. You really need to play along while reading the line and outs. There are three standards of play available for four computers with a handicap feature built in.

A bevy of pioneers are sent to exploit a distant planet with the aid of Multiple Use Labour Elements. With a starting lumpy

plus a small store of goods, each player attempts to develop the environment better than the others by selecting the most productive land plots for the production of food, energy or maybe smithies. You stop through several phases: claiming a plot of land; fitting out your M.U.L.E. with the most suitable equipment; wampus hunting or gambling; the actual production with the possibility of the odd odd rain storm etc to foul things up, and the most important, carry bading section. There's Beginner, Standard and Tournament modes. As you would expect,

the character with the most assets is declared pioneer of the year.

Things gradually get more complex with the introduction of fresh concepts to give the game matter a more strenuous work out.

A complex trading game with the odd cartoon interludes, best played with a full house. **LS**

Presentation:	★★★★
Skill level:	★★★★
Interest:	★★★★
Value for money:	★★★

War Machine
Commodore 64
Pocket Money
Software
Price £1.99/cass



Microdeal have decided to wedge into the cheapie market with the Pocket Money label, mostly concentrating on the Dragon but with a couple for the 64.

When the Vic was young, the

manual contained a game that was impossible to enter correctly until Commodore blurted out a

pathetic apology-cum-explanation far too late to comfort exasperated first time users. That being said 'Tank Vs UFO' and is still to be found served up more professionally in type-it-yourself books. As a sucker skims overhead you have to spurt out shells, avoiding returned bombs at the same time obviously timing is everything. Engaging enough when you've managed to get a feeble from a listing but hardly up to the standard of the latest space epics. Still, if a simple ballistic ex-

change is what you're after then you will be more than pleased to buy a machine language version that throws in enemy tanks to boot. There are several lines to move about in, delineated by rocks which are but minor encumbrances for trained hunter-killers. Simple action but as fast as you like. **LS**

Presentation:	★★
Skill level:	★★
Interest:	★★
Value for money:	★★



Dropzone
Commodore 64
US Gold
Price £9.95/cass
£14.95/disk

If you've had a micro of any description for the last three years you will doubtless have seen several shots on Defender plus one or two straight imitations. *Guardian* by Alligat was surely the best of a bunch that included quite a few stinkers.

But now the marauding, frazzled fers have boomeranged back again, thinly disguised and with aliases, defying you to send them to happier hunting grounds.

The normal rugged terrain, only shown in outline in the past, has been given the full in-depth treatment, and now you get a well defined lunar surface. You

joystick no longer prompts a jet jet but a very vulnerable looking chopper in a space suit sporting a jet pack. He's carrying a ridiculously powerful laser and the customary arsenal of smart bombs — which he must keep tucked in his utility belt. Invisibility and invulnerability is but a stab of the F7 key away, but you have to earn extra units by nifty shooting.

Your task is to escort the humans to the Dropzone lines, capturing the planters (nasties) who release androids which mutate you: chums into nemesis (more nasties). Blunderstorms (nice one!) send

out lightning flashes and a deadly dazzle. Then there are baiter contraptions, spores which release trailers plus the essential anti-matter. The scrolling is smooth with no annoying jerkiness or licks although *Defender* characters must be small the definition could have been improved had dark blue been avoided. This is a neat, hectic entertainment package. Classic blasting. **LS**

Presentation:	★★★★
Skill level:	★★★★
Interest:	★★★★
Value for money:	★★★★



The Chess Game
Commodore 64
Micro Classic
Price £7.95/cass

The alphabet 'original' can be bestowed on this first release from the new software company with the ambitious sounding name. As they have already written *Hunchback* for Ocean, this launch program is not likely to be a flash in the pan.

What we have here is a series of arcade puzzles, enacted in full perspective, designed from a chess fanatic's full-blown nightmare. It may seem a breeze to march pawns across a chess board even if a hostile horde of crasps is hemming you in... but it isn't. Hunting you down is a

different chess piece on each screen, clonking around through the recognised move patterns. Combine that threat with the deadly red squares (again generated in a different manner for each phase) and you have a real challenge on your hands. It's a game you have to work at, probably appealing in the main to the 'sophisticated' gamblers or the jaded zappa. The one won't date like last year's space games.

The graphics are just the ticket. The oddball freaks, ever ready to grab you should you trip

over the edge of the board, have that medieval creature-from-hell look and are much given to hurling fireballs. As for the animation, it's realistic 3D throughout all 64 squares.

If you are determined there is plenty of entertainment to be tepped. **LS**

Presentation:	★★★★
Skill level:	★★★★
Interest:	★★
Value for money:	★★★★



Timeslip
Commodore 16
English Software
Price £6.95/cass

Timeslip, for want of a better description, is a bit like three versions of *Scramble* rolled into one. The screen is divided into three sections or time zones. At the top is the planet surface, this is the nearest thing to *Scramble* proper. You have to manoeuvre the rocket ship over the terrain and blast literally everything that gets in your way. Whilst you score points for this, the short-term objective is to destroy the twelve orbs placed in very awkward positions.

When you've wiped out the orbs in zone one it's on to zone two and what the blur

describes as 'jet through the underground caverns'. My version had underground caverns alright, but the 'jet' bore more of a resemblance to a *aparrow*. Anyway, the order of things in zone two is much the same as for the previous one. You have to manoeuvre the jet (aparrow) around all the nasties and destroy the twelve orbs.

You have to complete your mission and destroy all 36 orbs in 24 hours (not real ones). In addition, you must synchronise the clocks in all three zones to 00.00 hours.

If you do take a hit, or do

something stupid like crash into the mountains, you incur a 30 minute penalty. As if that wasn't enough to screw you up, if you get hit five times a 'time-slip' occurs, i.e. all the clocks are desynchronised. Ha ha what a laugh. Had me in stitches after I'd spent half an hour getting them almost right. **[B]**

Presentation:	■■■■
Skill level:	■■■
Interest:	■■■
Value for money:	■■■



Super Gran
Commodore 16
Tynesoft
Price £9.95/cass

I'm going to have to be a little more limited in my praise than I might have been. Having loaded *Super Gran*, I eagerly plugged my joystick in and proceeded to whizz around the screen on the famous 'fly cycle'. Good graphics has, I thought, and a considerable improvement on the 64 version despite inferior graphics.

Only problem was, half an hour later and I'm still there trying to avoid the impostor Gren and his deathly cannonballs. I come to the conclusion I must be doing something wrong and refer to the instructions. 'Gren's only protection is to use his magic

Ray Machine. Having survived that screen she moves on to the next action.'

No, I seem to have got it right. I go back and have another bash, this time persevering for over an hour, but the maximum amount of time I seem able to survive is about a minute, obviously not long enough. Now I'm no welly when it comes to handling a joystick. I made Group Captain in *Spartan 40* I'm up there with the best, honest. But this one had me stumped.

I can understand Tynesoft wanting to make the game a challenge, but isn't this going a bit far? Apparently, if by some

superhuman feat you manage to get past the fast action, there are five more to tackle. Please! So all I can really say is that the first screen of *Super Gran* is pretty good in terms of graphics and sound, if a little difficult to get to grips with. If the following screens are up to the same standard then it's not half bad and should keep you occupied well into the next decade. **[KM]**

Presentation:	■■■■
Skill level:	■■■■■
Interest:	■■■
Value for money:	■



Sword of Destiny
Commodore C16
Gremlin Graphics
Price £6.95/cass

Sword of Destiny is one of those games that comes with a cassette lullaby of hype, but which in itself doesn't amount to an awful lot. Just take a look at this. 'Kelok - a master warrior of the eastern region - has been killed in battle by Xophes, an evil warlock. Not content with killing Kelok, Xophes has stolen his heart, leaving Kelok's soul to wander for ever, doomed to the torment of death with no peace.'

It goes on, I'm not against this sort of thing in principle, it adds an imaginative angle to games, but it has to be backed up.

Basically, *Sword of Destiny* is

a platform game without too many platforms. You move Kelok around, killing the various zombies with a swipe from the old sword. As well as this you must pick up certain objects as you go to open up other sections of the Abyss. Killing the zombies is an activity which must be executed with a certain amount of gusto otherwise you run out of Astral Power and it's start again time.

Graphically it's not at all bad. Kelok himself looks a bit like a Roman Centurion and moves quite smoothly. The zombies bear a remarkable resemblance to flying telephones.

Apart from anything else the game seems to lack any kind of structure. After half an hour of killing telephones I began to think: why am I doing this? The answer? I was trying to work out why the music kept turning itself on and off for no apparent reason. Maybe Gremlin should get the people who write their in-lays to design the software. **[KM]**

Presentation:	■■■
Skill level:	■■■
Interest:	■■■
Value for money:	■■■



Dork's Dilemma
Commodore 16
Gremlin Graphics
Price £6.95/cass

Dork's dilemma is a stage that he has crash landed on a strange planet that looks remarkably like a maze. He leaves the tangled wreckage to take a nose around and in his absence the aliens, or natives depending on how you look at it, have dismantled the craft and hidden the bits.

This is where you come in. You have to guide Dork around the maze to retrieve the fragments of his ship, there are no on each screen. They are not too difficult to locate because each part is smack in the middle of the screen. The difficulty arises in avoiding the Zobwats - little

creatures which follow you around and attempt to entrap you in cut-de-sacs. Contact with a Zobwat spells instant death.

Another thing in your favour is that you can convert Zobwats into alien pulp by employing the laser split time bomb (that spelling, not mine). The only problem with this device is that it's fairly indiscriminate. It has a very short fuse and unless you're quick on the retreat you'll end up pulped along with the hapless Zobwats.

If you get to the centre of the maze you can pick up your space part and then move on to the next screen. Should you get to

the stage where you have all the bits they then have to be assembled in a jigsaw on the far right of the screen. I didn't actually get this far - I got bored.

On the whole, Dork is a pretty average game. There's nothing wrong with the game, at £6.95 even the price is average. I just wasn't inspired. **[KM]**

Presentation:	■■■
Skill level:	■■■
Interest:	■■■
Value for money:	■■■

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Skyfox
Commodore 64
Electronic Arts/
Ariolasoft
Price £9.95/cass
£12.95/disk

Skyfox provides us with an irresistible opportunity to resume the debate over American software versus our own home-grown games. The game comes from the Electronic Arts stable — probably America's premier games house.

Judging from the enthusiasm with which they demonstrated it at the recent Consumer Electronics Show in Chicago, they obviously consider it to be pretty hot — definitely one of the best titles in their latest batch of releases.

So what is it? Basically a 3D

shoot 'em up in which you pilot the *Skyfox* Mach 4 Federation fighter plane, against the enemy, whose motherhips are attacking Federation asteroid bases with aircraft and tanks.

The game has a tactical side as well. You must use information from a satellite-view to track the positions of the invaders and plan your attacks. All the normal flight aids you'd expect with this type of game are present: shield, scanners, radar, autopilot, and a thrust button. Weaponry is equally sophisticated, including guided missiles as well as normal rockets.

Graphics are superb. Highly detailed, and fast moving. This is undoubtedly a high quality game BUT — there is nothing new or unique about it. It may be a slightly better rendition of some of the 3D strategy shoot 'em ups that have gone before but it is not breaking any new ground as far as gaming is concerned and is



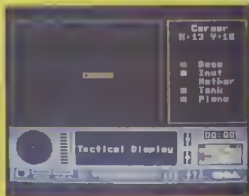
not up to the high and innovative standards set by Electronic Arts in the past.

If you want a deep space shoot 'em up with strategy thrown in then *Elite* has to be a much better buy. If you've already got *Starfall 7*, *Death Star Interceptor*, or any one of the dozen or so rip-offs of *Star Raiders*, there is absolutely no reason for you to consider buying this anyway.

So where does this leave us in the debate? For my money if

this is the best that America's top games houses can come up with then British software houses should take cheer. *Shadowline*, *Strange Loop*, *Way of the Exploding Fist* and *Entombed* are all better games than this piece of Yanksoft. **EL**

Presentation: ********
Skill level: ********
Interest: *******
Value for money: *******



Monster Trivia
Commodore 64
US Gold
Price £9.95/cass
£14.95/disk

This — as the title hints — is an unlicensed version of the current fad board game 'Trivial Pursuit'.

The basic plot is that you enter a Professor's mansion and are taken down to his cellar, where the Trivia Monster awaits. If you know lots of incredibly useless facts about nothing of importance, then you might escape the monster's clutches. Prove dumb and he has you for dinner.

So far, so good. What we have is an excuse to test out your general and specific knowledge something everybody likes to do, that's why quiz shows are popular. But I'm not that easily satisfied.

First of all you have a choice of fifteen different sets of questions, which you select by loading the tape at a certain point on the tape counter. It took me several loads to get it right and proved pretty irritating. Never mind, I thought. Cosmi did the

same thing on *Super Huey*, it doesn't really make the game plough on regardless.

There you are sitting down in the collar, sitting next to your partner. It's a game for 2-4 players before being led to the monster. You have a choice of several options such as sports, showbiz, the arts and history and you have to type your answer into the machine. Now let me ask you a little question before we go any further. What do all US Gold games have in common? Easy one, they're all American, you reply. Correct, well done. Do you know what that means in respect to this game? No don't bother, I'll tell you. The questions are for Americans. This doesn't really matter too much for the arts because they don't

have much to speak of, but when it comes to sport, you're likely to find yourself struggling over baseball and American football questions. History dwells on wars of independence, battles with injuns and obscure treaties between States.

This is all inexcusable. US Gold have snapped up the game and bashed it out without bothering to reprogram some angloised questions in place of all the Yankee trivia. Money for old rope in other words. Save your dosh and do a crossword or, if you must, buy the board game. **MP**

Presentation: *****
Skill level: ********
Interest: *********
Value for money: *****

SCREEN STAR

Summer Games II
Commodore 64
Epyx/US Gold
Price £9.95/cass
£12.95/disk



In the Top Ten computer games that should have been hits, *Summer Games* must surely take the

It was much better than *Daley Thompson's Decathlon* but in Olympic year no one could resist the personal endorsement of our

gold medal winning equestrian. Epyx are not taking it lying down, though. The Top American arcade game writers *Impossible Mission*, *Pistolip* I and II have just launched *Summer Games II* — with eight new events. Joystick mangles are going to love this one. It features the

time one of them was an event. There is also an opening ceremony complete with white doves and, of course, a winner's rostrum.

The new events are Triple Jump, Rowing, Javelin, Equestrian, High Jump, Fencing, Cycling and Kayaking.



same file that made the original games so eye catching. Things like the nation selection board —

The best of these is the Equestrian challenge which is a masterpiece of programming.

different positions of the joystick. First make your horse canter, then gallop, approach the obstacles correctly, jump, and

then land without falling. It will take a lot of practice to get it right but it's fun when you do and the animation is stunning.

The javelin is also excellent — you can almost feel the weight of the spear as you balance your stance for the throw.

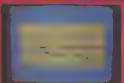
What I like about *Summer Games II* is that more skill is required to master it than with other similar games. It's more than just shaking the living daylight out of the joystick.

With the high jump, for example, you've got to get your approach to the bar just right — as well as building up sufficient pace.

Race tracks are not left out, though, as there are two of these, cycling and rowing, as well as a head to head fencing bout.

Ask any 64 gamer what, in their opinion, is the best sports simulation on the market and chances are they will say *International Soccer*. That opinion is going to change — *Summer Games II* must now take the gold.

Presentation:	★★★★
Skill level:	★★★★
Interest:	★★★★
Value for money:	★★★★



Kennedy Approach
Commodore 64 C16
Commodore
Price £5.95/cass

It's a very simple game, but it's a very good one. It's a very simple game, but it's a very good one. It's a very simple game, but it's a very good one.

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Presentation:	★★
Skill level:	★★
Interest:	★★
Value for money:	★★



Kennedy Approach
Commodore 64
Microprose/US Gold
Price £9.95/cass
£12.95/disk

Kennedy Approach is an air traf

fic control simulation based around some very impressive speech synthesis. You literally talk the approaching planes down as they circle the airport.

To make contact with an incoming plane you position a grid over the plane with the joystick. Press the fire button and the computer speaks the name of the flight, its flight number, and issues its instructions. The altitude, bearing and direction are all adjusted to meet the tower's orders.

As well as keeping a constant check on the positions of all aircraft there are additional hazards such as mountains, severe

weather and even over-cautious security forces in Washington who will shoot you out of the sky if you fly too low over the White House.

At the end of a shift your performance is measured and you are paid accordingly. Bonuses are awarded for successful landings, proper exits, and emergency landings handled correctly.

If you commit any major errors, such as a crash or missed exit, you are sacked and your career as an air traffic controller is at an end. If you do make mistakes the game enables you to view an action replay.

Kennedy Approach is an ex

cellent strategy game. If you prefer the deeper, more involved type of game than this is definitely for you.

After playing it for a couple of hours you begin to feel some of the power and tension of a real life air traffic controller.

'Wild Bill Steeley and the Microprose team have come up with another excellent flight game. Deserves to do as well as *Solo Flight*.

Presentation:	★★★★
Skill level:	★★★★
Interest:	★★★★
Value for money:	★★★★



Action Biker
Commodore 64
Mastertronic
Price £1.99/cass

I'm not sure what KP Skips Gummy Colin has got to do with this latest game from Master

tronic but it didn't stop me from playing, and enjoying it.

The KP Skips (love the Prawn Cocktail ones) symbol comes up on screen when the game is loading and also appears on the front of the info card. I suppose the theory is that if you like the snacks you will like the game.

Anyway, back to the game — which is a whole lot of fun, and the best Mastertronic cheapie I've played yet.

It's a 3D scrolling game, a la *Ant Attack*, only much faster and better. It is no easy task men ouevning your bike and coping with its gears, speed, and the sharp bends. Stay too far off the

road and you will run into a lance, well, or building.

Certain items are dotted around the town and these can make you race a little easier. The crash helmet is a good precaution. Particularly if you find the turbo charger that puts a little extra zing into your acceleration.

At the end of the game (if you have successfully explored the town) you will find yourself in a drag race. This is the supreme test of your riding skills. As you ride you will need to keep an eye on the information panel below the scrolling view of the town. This tells you how much fuel

you've got left. When you are running low, find a petrol station pull up beside the tanks, and you will automatically be refuelled. The panel also tells you how you are scoring. Bonus points are awarded for speed.

All in all this is a very reasonable buy at £1.99. We tend to use caution where cheap software is concerned but in this case you can't reach for your head armed with confidence. **EL**

Presentation:	■■■■
Skill level:	■■■■
Interest:	■■■■
Value for money:	■■■■



Enigma
Commodore 16
Commodore
Price £5.99/cass

Enigma is a Berserk-type game. You know — a little robot, dozens of rooms full of nasties and several keys to be collected. The original *Berserk* started out in life as an Atari arcade game, was converted to run on the video games console, and has since been copied on just about every home computer at least a dozen times.

Many of the highly sophisticated arcade adventures now on sale owe a debt to the basic room-exploring design of *Berserk*. It's a brilliant game idea that still works well.

Enigma is a very worthy copy of the game. Colour and graphics

are used to good effect.

Each time you enter a new room the background colours change — which is rewarding and helps keep you interested.

You robot is armed with a laser gun that spits out bright blue shots in the eight different directions of the joystick.

One of the most enjoyable bits of the game is when you enter a room full of nasties — you can spin your joystick through 360 degrees blasting all the nasties in one go.

This is a bit risky, though, and it's probably safer to pick them off in ones or twos.

When you have collected all

the keys the game is won. Each time you get a key it registers on a panel at the bottom of the screen — and with a beep from the C16.

If you liked the original *Berserk* game then you will like the too it's encouraging to see Commodore supporting the 16 with some good quality games. **EL**

Presentation:	■■■■
Skill level:	■■■■
Interest:	■■■■
Value for money:	■■■■

JULY RESULTS

There I stood at the Gates of Dawn with a huge boxful of entries for last month's Screen Scene Competition in my bag.

It weighed a ton as several thousands of you liked the idea of writing a short story that included the names of all of the games we reviewed in Screen Scene in June.

After much argument over who should win, the CJ team finally decided on Pauline Britton's entry, Pauline, of Cartmel Terrace, Darlington, in Co Durham, stuck closely to our request to "keep it short and interesting". Here is her winning entry:

"There I stood at the Gates of Dawn with my Ghettoblastar by my side. Over to the right was a Derk Tower, a Tower of Evil, it was beyond the Realm of impossibility that I could buy a Big Mac here.

I had traveled to the Moon Cresta for the annual games, in the Sky Jets were flying and the Gilder Pilot flew his Doodle Bug in a Sirange Loop just missing a Boulder. "Dash 2 late" said a hung-over Super Gran. "Suffering from Grog's Revenge eh!" enquired Jonah Barrington. "Squash is what you should drink to, Hi Bouncer Mind'er over there she's drunk." At this along came Bounty Bob. "Strikes Back on" he told them, "all because Stringer was Entombed in the Rock. Man that was some Operation, Whirlwind got up and the Super Pipeline was blocked. We thought it was a case of RIP, but Brian Blood Axe'd his way through so he could Carry On Laughing." "Blogger Goes to Hollywood tomorrow" said Berks II and III in unison, but no-one took any notice as Roland's Race was about to begin. It was no ordinary race as it included Spooks, among them were Talla, Dege and a group from the Theatre. "Europe the gears together" said Spy, Hunter of the town. "Fasten li to the Rock 'n' Bolt it down". Indoors the Cave Fighters were getting ready to begin their Operation, Sword, Fish and other sirange weapons at the ready. All in all it was one bumper package of games."

Five other entries are worthy of mention. Colin Hoggar's for pure cheek. He thought of a clever way of presenting all the games in one long list "There I stood" etc. "An announcement came on the radio 'The winner of the Commodore Usar great software competition for the shortest story is Colin Hoggar. He wins the following' Clever Colin, too clever.

Roy Beauloy also gets a mention for submitting his entry on a cassette in program form. Well done Roy, Andy Clarke of Althorpe, Marc Foreman of Leeds and Phil Oldmeadow of Shepway were also strong contenders in the final shortlist.

Thanks to everyone who entered — we haven't enjoyed judging a competition so much for ages.

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CURBS



Five Aside
Commodore 64
Anirog
Price £5.99/cass
£8.95/disk

Anirog follows up their last sports success with a five-a-side football game and a penalty shootout competition for one or two players. If you bought *Slap Shot*, though, you're going to get a severe case of déjà vu.

What crafty old Anirog have done is keep the old program and change the graphics so the men look like footballers. This means that the ball is constantly in play just as it is in the real thing. However, it roaches around the pitch like nobody's business and sounds just like a puck. All the features of the ice hockey game are still there, and some of the faults too.

Most out of place is the roughing facility which allows you to

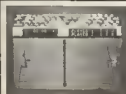
stand over an opponent, hit the joystick button and dump him on the ground. Too much of the dirty stuff and you give away a penalty for roughing. The penalty is simply a kick-off to the other team. Come on, Anirog, you could've changed the rules for this bit at least! If you persist in fouling a player you run the risk of provoking him to turn round and slug it out with you. This results in each side getting a penalty. Bizarre rules!

The better option in this game is the penalty play off. You take penalties alternately against your opponent, acting both as kicker and keeper. Graphics here are better, with a large chunky keeper, although the goal is a bit small and the ball a bit large. You

also have few shooting options with the joystick.

Sound is often the best thing about Anirog products and this game features speech such as 'he's scored', whistling and cheering. Here we go! plays throughout. At the price it's not bad value, but it seems deft putting out a football game unless it's going to be an improvement on the Commodore version. No, it is worth buying if you bought *Slap Shot*. **[MF]**

Presentation: **■■■■**
 Skill level: **■■■■**
 Interest: **■■■■**
 Value for money: **■■■■**



International Tennis
Commodore 64
Commodore
Price £5.99/cass

Commodore has a well-earned reputation when it comes to sport simulations. *International Soccer* was the standard for

everybody else, and their recent basketball game demonstrated that the style was still way ahead of all the opposition. Supersoft's belief in their programmer when they were producing a cricket program was for it to be the equivalent of Commodore's Soccer. So with a new release from Commodore you'd expect them to stick with what is, after all, a successful format. Wrong.

Gone is the chunky figures of old, gone is the smooth movement and definition there once was. Gone is programmer Andrew Spencer, in place of all these attributes is something that is not awful, but merely average. The major problem lies in the game play. As before, the ball has a 3D effect shadow but

because the rest of the game is rather two dimensional and the shadow is so small, it is very difficult to pick up the path of the ball. You're likely to be standing on one side fully expecting to receive the ball on the backhand and end up having to run across court. This is a major obstacle to enjoyment.

In contrast to Activision's *On-Court Tennis* (reviewed last month) you have to move your player to the ball and play the stroke. The eight different joystick directions allow eight strokes such as 'short cross down' and 'medium cross up'. You will not master the game immediately. It is very difficult to hit a ball on the run, because you are moving the joystick in one direction and as soon as you hit

the lee button you will hit it in that way.

Serving is reasonably simple but that is where it ends. You need to be able to rally well and to do that you are going to have to spend a lot of time mastering the controls. I get the impression that has been a rush job to get it out for the Wimbledon bug that grips the country for two months every year. **[MF]**

Presentation: **■■■■**
 Skill level: **■■■■**
 Interest: **■■■■**
 Value for money: **■■■■**



Crazy Painter
Commodore 64
Pocket Money
Software
Price £1.99/cass

Normally on 'Painter' games you have to zip round a grid avoiding cheques summoned up from the depths of the author's imagination. Here you have to coat the entire screen through eight levels of difficulty while

suffering from the attentions of meddlesome oafs. Each creature or object will spoil your handiwork in a variety of ways. Dogs plough through, bubbles burst and splatters away a sizeable chunk while worms... well, worms that way drastically excess prairie pot costs. There are also paint-pot and brush nicksers bent on preventing you completing the eight screens. While this is going on a continuous melody is churning out from the SID chip.

Not the most exciting of games to be sure but it is dif-

ferent and well worth the asking price especially to our younger brethren. 'Cheesple's' alien reflect the state-of-the-art of two years previous which is okay if it's a simple game you're after. Looking at the titles available for the Dragon it is hoped that Steve Bak will convert a few for the 64 to give up the budget market further. **[LB]**

Presentation: **■■**
 Skill level: **■■■■**
 Interest: **■■■■**
 Value for money: **■■■■**

:COMPOSE

Activision's Music Studio reviewed by Fred Field

Remember the impressive rendering of the *Ghostbusters* theme tune in Activision's megagame? Now, that same company has produced a music composer program for the Commodore 64 that looks like being just as clever: it lets you use colour and even write your own lyrics. Producing a smash hit couldn't be easier?

There's probably been more than enough music composer/synthesizer packages developed for the Commodore 64, most of them had some pretty severe limitations. What a pleasant surprise to discover that Activision's beautifully written **Music Composer** package seems to have found its way round most of its predecessor's hang-ups.

Two versions of Music Studio are available: the cassette version on review here and a slightly more advanced version for disk users. It will cost you £14.99 on cassette and £19.99 on disk.

In both cases, the software arrives in a library-sized case along with a truly pocket-sized manual (comprehensive despite its size), and a supplement for users of the cassette version. In any case, the Music Studio manual provides all the necessary information to get you started quickly.

Getting started

Loading from cassette takes just over three minutes and while you're waiting you're entertained with a hi-res picture of a studio foyer. When loading is completed, you are requested to 'Press Stop on Tape', and select an input device. Music Studio lets you use either a joystick or a touchpad (such as the Koalepad) to manipulate the 'baton' shaped cursor.

The music editor screen is dominated by the stave (the ten lines that you write music on), with the lower third of the screen given over to the 'menu'. Each item on the menu is depicted by a picture or symbol. When the cursor rests over the picture of the function you wish to use, simply pressing the fire-button will set things in motion.

Perhaps the most graphic example (no pun intended) is the trash can. Positioning the cursor over the trash can picture and pressing the fire-button twice (to prevent accidents) will completely erase all

the music, leaving you with a blank stave. Similarly, there are pictures of a printer (for printing your music), a cassette (for load and save options) etc.

Write your music

Writing music couldn't be simpler. Move the cursor over to the note symbol, press the fire-button to select note entry and again to enter the note length (from semiquaver to omnibreve) if you desire, and move the cursor up to the stave. As you reach the bottom of the stave the cursor is replaced by the selected note and you simply position it at the desired place on the stave.

Pressing the fire-button fixes the note in place and you can then position another note. As the note moves up and down the stave, Music Studio plays that note so you know where it ought to go.

Adjacent to the note symbol in the menu are symbols for rests, dotted notes, incidentals (sharps and flats), and even triplets (a triplet is

three notes played in the same length of time that you would normally play four notes).

When you have entered a few notes, you'll be eager to hear what you have written. Simply point the cursor at the picture of an ear, press the button, and Music Studio obliges with a note-perfect rendition of the masterpiece you have just written.

A full range of editing commands are available; just select the appropriate symbol with the cursor and Music Studio responds. Various options include delete and insert a column (of notes), move a block of notes, copy a block of notes to another part of the stave etc. Selecting the picture of a synthesizer panel will get you through to the sound editor screen.

Change your sounds

Editing sounds is every bit as easy as editing music, perhaps even easier! Along the bottom third of the sound editor screen is a menu of



Stave and menu options appear on the same screen—just choose your note and place it on the stave

YOURSELF:

the default preset sounds that are automatically loaded with the main program. From this menu you can select such diverse sounds as Clarinet, Flute and Tuba from a choice of sixteen definable sounds.

To alter a sound to your own specification simply select the function you wish to alter (wave shape, envelope, filter settings etc) and modify to your heart's content.

Most of the sound functions are adjusted by selecting a fader with the cursor, pressing the button removes the cursor and allows up-down control using the joystick.

You have the choice of playing back a composition while you alter the sounds (select the ear symbol again) or selecting a continuous up-down scale of variable speed (very useful for adjusting the envelope control).

If you wish, you can build up a whole collection of instruments and sound effects, name them, and save the whole lot to cassette (use the cassette symbol on this screen for saving sounds) for permanent storage.

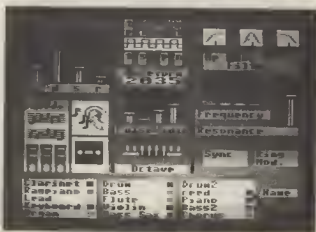
The package's ease of use is not far removed from controlling an actual synthesizer panel, thanks to the pretty stunning graphics. To exit the screen, you simply take the cursor off the bottom of the page, press the fire button and you arrive back at the music editor screen.

Pointbox mode

The manual describes this mode as a 'free-form method of composing'



Pointbox Mode for colourful free-form composing



Sound Editor screen is attractively laid out and contains a huge variety of editing functions

and it's designed for people who don't feel comfortable using real musical notation. So you use colours and shapes instead of choosing a real instrument and a series of notes. The idea is to 'paint' onto the etave rather than compose.

Although this, to me, seemed the least attractive part of Music Studio, it is intended to be a short-cut method of producing music. Moving back to the Music Editor screen converts your composition into standard musical notation. Like other compositions, these can also be saved to tape or disk.

Finally, an unusual facility in Music Studio is that it lets you write lyrics under the notes you've just composed. Once again, all you need do is choose the 'words' option on the menu, point the baton to the note to be written under, and type the word in from the keyboard. There's room for up to four verses.

Conclusions

Overall, this is a beautifully thought out and implemented piece of software. It's not only easy to use but pleasant to look at. The manual may be only pocket-sized but it's well documented — and it even gives you a brief tutorial on music theory. Apart from all that, it's very reasonably priced and must represent good value.

- The Music Studio
- Activision
- 184 Regent Street
- London W1
- 01-439 7731
- Price: £14.99 (tape)
- £19.99 (disk)
- Highly recommended

Next month we'll be looking at Island Logic's The Music System, just converted from the BBC machine for the Commodore 64.

How do you get to talk to the world boss of Commodore? With difficulty. Eugene Lacey tracked him down to his plush Philadelphia office for his views on the new 128, the long-awaited Amiga and the future of Commodore.

Marshall Smith is the man at the very top of Commodore. Or — as a fellow executive put it when I visited the firm's headquarters at Westchester, Philadelphia, USA — "he's over the whole enchilada".

A pretty huge enchilada it is too, with 900 employees based at Westchester, another office on the West Coast of America, factories and offices in the UK and throughout Europe, as well as a number of component manufacturing plants in the Far East.

Smith was brought in to head up Commodore after the departure of charismatic Jack Tramiel in a boardroom battle which saw the company founder depart, taking his two sons with him, (and half of the top brass of the company), to take over Atari.

The battles at Commodore dominated the computer press headlines in the US when Tramiel left. The former typewriter repairman and calculator tycoon creates news like few others in American hi-tech. Tramiel is a hard talking ("business is war") tough dealing embodiment of the American business dream. A first generation immigrant and self-made millionaire.

Getting rich in the US deserves status like nothing else. But to do it all by yourself and from humble roots is the British equivalent of scoring the winner for England in a World Cup Final, getting a first at Oxford, and becoming Prime Minister before the age of forty all rolled into one.

To say Marshall Smith had a tough act to follow is a huge understatement. But despite all of this I found no evidence of the ghost of Tramiel stalking the corridors of Westchester.

What I did find was a buzz of excitement about two new computers — the C128 and the Amiga — and a belief that these new

machines will rekindle Commodore's flagging fortunes in the cut-throat computer market.

The man at the top surveys this new optimism from the second floor of the rambling Commodore buildings that spread over several hundred acres of beautiful Pennsylvania countryside.

The office itself is straight out of "Dallas". About the size of an aircraft hanger with suitably gigantic furniture to match including the standard boss's leather swivel seat.

The six foot, white-

haired, world boss of Commodore settled himself behind his desk and kicked off by saying some nice things about the UK.

"It's always been a very important market to us ... and some of our best software has come from there". But what about the competition, Amstrad, and Sinclair, can Commodore regain some of the lost ground won by these competitors?

"Clive Sinclair seems to be something of a folk hero in the UK. But it looks as if he stubbed his toe with the QL". And Amstrad? "I want to go over to England and talk to some people, shop keepers and users about that. I think Amstrad will be our main competitor in Europe this Christmas".

New computers, new hopes

Generally Marshall Smith is

bullish about Commodore's performance for the remainder of '85. With a third quarter loss of nearly 20 million dollars he needs to be confident about the future. His main hopes are pinned on the new computers — principally the 128 and the Amiga.

Commodore estimate that 28% of existing 64 owners in the US are going to upgrade to the 128. Extensive research and machine tests have been carried out with user groups there and many of the glowing comments from loyal Commodoreans plaster the corridors in Westchester.

"We put them there to get the people around here hyped up a bit", says Smith with a smile, but quickly adds that all of the excitement about the 128 and praise from users is entirely justified.

Humour seems to be a



major part of Smith's style. When a waiter interrupted his speech at a recent press reception by dropping a tray of drinks he had the confidence to quip "is that Tramlet at the back".

Commodore. Certainly the firm are going to need all of their muscle as they go into the next phase of the war for market shares in the home and business computer industry.

the pipeline".

The American computer industry is clearly excited about the Amiga — its advanced specifications and the software it promises — though one audience is yet

grammers can't resist those graphics chips, but the business software is going to be more problematic.

Big business software houses don't like non-sten-

GOING FOR THE PRESIDENT

Commodore International boss, Marshall Smith, interviewed

But if it's a jolly, elder statesman public image, its every bit the shrewd business administrator with years of boardroom experience, behind the scenes.

Smith moved in cautiously to fill the management vacuum left by the departure of the Tremellies. The young team he has assembled around him have pretty impressive credentials — hand-picked from companies like Coca Cola and Apple. In American business terms that's pretty high up the ladder.

Marshall Smith's own credentials for heading up the world's largest manufacturer of home computers are no less impressive. Michael S Tomczyk said of him in his book about Commodore, "a 54-year old manufacturing and finance specialist with extensive experience in the rough-and-tough steel industry".

Immediately prior to joining Commodore, Smith was President and Chief Executive of a huge manufacturing company called Thyssen — Bornemisza. He is used to managing multi-million dollar companies.

With its growth pattern of the last few years Commodore is now one such company. That sheer size is now both the strength and potential Achilles Heel of

This phase of the battle will take them into competition with the real big boys in the business — IBM and Apple. If Commodore can be said to have a secret weapon reserved for this conflict it must surely be the Amiga. The 32-bit business machine with its 68000 processor and now famous customised chips code named 'Portia', 'Agnes', and 'Daphne'.

The Atari Attack

I asked Marshall Smith if the Amiga wasn't just the same as the Atari ST. "There is just no comparison with the ST. Anybody can pick up a Motorola chip for \$8 and build a machine around it, but it can't do half of the things that the Amiga can... it can't multi-task. The sound, colour and graphics on the Amiga are better in every respect". So you are dismissing Atari? "I never dismiss competitors... any time I've done that before I've lived to regret it".

Marshall Smith expects IBM and Apple to respond to the Amiga. "They both have world wide reputations... IBM is a world stender and Apple is very strong here in North America. We know that Apple is working on a colour Mac. IBM too are known to be working with graphics and they have the PCII in

to be convinced, the retailers.

What they want to know is, at between \$1000 and \$1500, who is going to buy it? Marshall Smith has the answer.

"It's not a beginners' machine, though for some people it will be their first computer. Business at home is what Amiga will offer. I expect it also to appeal strongly to a computer literate audience".

Commodore expect the Amiga to be in their range of machines for a long time. "The machine is going to last... we are looking at a whole family of machines". How long exactly will it last? "I'll settle for — what was the Apple II? — eight years? — that'll do" says Smith.

Amiga means business

Clearly Amiga will also have to compete in the business computer market. One question mark over the machine's viability here will be third party software support. Home entertainment software is no problem with Electronics Arts (12 titles) Broderbund, Mindscape, Activision, Infocom, and First Star all beavering away writing games on pre-production machines. No doubt there is going to be lots of games — the pro-

grammers can't resist those graphics chips, but the business software is going to be more problematic.

Big business software houses don't like non-sten-

Perhaps the real question is not what operating system Commodore will eventually nail its colours to but where does the company want to go. Business, home, or both?

Marshall Smith claims to have a clear view of this even if no one else seems to. "Our turf is the home, the school, and the office" he told a press gathering in Chicago in June. If he means it he is going to need all of his big business experience to pull all of that off against IBM, Apple and the Japanese in the years ahead.

Since the dawn of the computer age the prices of home computers have been steadily falling.

But, remarkably, the price of a genuine, full-blooded disk drive has remained almost constant.

Constantly expensive.

You'll be lucky to pick up a decent one for less than £200 in the shops.

Now, however, you can have one delivered to your doorstep for only £119.95 (including VAT and postage and packing).

The new Triton Quick Disk from Radofin.

Its specifications are every bit the equal of a £200 disk drive, as a glance at our card above will confirm.

Quick Disk uses the very latest technology to store up to 100K on high quality Hitachi Maxell double-sided 2.8" disks.

Its disk operating system (DOS) uses standard commands so it is truly easy to use, as any computer novice will be glad to hear.

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And, naturally, included is an interface box plus all connecting cables and instructions.

In short, what we deliver is a complete, genuine disk drive. Not a tape or wafer in sight. All for only £119.95.

And when it comes to speed of loading, the Triton Quick Disk more than lives up to its name.

AS A COMMODORE APPRECIATE THESE

FROM 0 TO READY IN 7 SECONDS.

To put the Triton Quick Drive through its paces we used an ordinary computer game - Jet Set Willy.

From tape it took 170 seconds to load.

When loaded from the Triton Quick Disk it took a mere seven seconds. That is 163 seconds less than the tape and certainly as quick as most disk drives on the market.

AS A WALLETS APPRECIATE

MORE USER YOU'LL THE SPECIFICATIONS.



Proof indeed that the Triton has all the capabilities of its more expensive rivals.

AS TEST DRIVEN BY THE EXPERTS.

New it may be, but the Triton Quick Disk is already receiving rave reviews in the computer press. For example, in a recent Home Computing Weekly article it picked up their much coveted "Flipped" award.

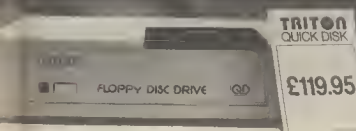
As their journalist said "... I am very

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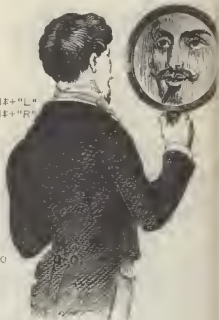
Spy Eyes

— for the Unexpanded Vic
by P. Donahoe

Spy Eyes is an excellent game based on a very simple idea. The screen flashes a list of directions for a mere split second, and you have to duplicate them on the keyboard. This is a doddle to begin with, but Herculean feats of memory are required as the directions get more complex. One of those games that makes you want to smash the Vic to pieces!

```

10 LET SP=0.3
20 PRINT CHR$(147)
25 LET H$="NOBODY"
30 LET H=0
40 LET K=0:LET S=0:LET L=1
50 PRINT " >>SPY EYES\." :PRINT
60 PRINT "PRESS G TO GO"
70 GET C$
80 IF C$="G" THEN GOTO 70
90 PRINT CHR$(147)
100 IF K=5 THEN LET LSL=1:LET K=0
110 LET M$=""
120 LET C$=""
130 FOR T=1 TO L
140 LET N=RND(1)
150 IF N>=0.5 THEN PRINT"LEFT":LET M$=M$+"L"
160 IF N<0.5 THEN PRINT"RIGHT":LET M$=M$+"R"
170 NEXT T
180 LET K=K+1
190 FOR D=1 TO 200*L*SP
200 GET C$
210 NEXT D
220 PRINT CHR$(147)
230 LET E=0
240 PRINT "WHAT WERE THE DIRECTIONS"
250 FOR T=1 TO L
260 PRINT "7";
270 GET C$
280 IF C$<>"R" AND C$<>"L" THEN GOTO 270
290 PRINT C$
300 IF C$<>MID$(M$,T,1) THEN LET E=1
310 NEXT T
320 IF E=0 THEN LET S=S+L
330 IF S=H THEN LET H=S
340 IF E=1 THEN PRINT "YOU LOST HIM! SOME SPY!"
350 PRINT "SCORE=";S
360 PRINT "HIGH SCORES";H
365 IF E=1 AND S=H THEN LET H=S:GOSUB 410
370 IF E=1 THEN GOTO 40
380 FOR D=1 TO 500*SP
390 NEXT D
400 GOTO 70
410 PRINT "THAT IS A HIGH SCORE"
420 PRINT "PLEASE PUT YOUR NAME IN"
430 INPUT H$:RETURN
    
```



Surprise Poem

The Great Bard couldn't have done better than this: a poem, appearing miraculously on your screen, letter by letter. But there's a twist in store at the end. The author has cleverly coded this verse so you can't read it until you've actually typed it in and RUN it.

"horrifying" — *Birdwatchers Weekly*.

```
1000 A$(1) = "BT'J'BXFL'F'OF'N'GOJONXIFQ'BHM'TXFFU'UIJOHT'BSF'CPBD"
1010 A$(2) = "B'SPCJQ'IBU'VQ'Q'NZ'J'JHN'.....UP'FDIF'UIF'DPNJOH'EBXD"
1020 A$(3) = "I'F'XB'GSHJMF'TXFFU'H8Z'BOE'ZFOH'.....BOE'TP'J'XFFUMZ'EJE'IF'J'
1030 A$(4) = "UIBU'UIPVHUT'P6'IBDQJQFT'BOE'FEZ'.....JOUF'NZ'IFBSU'EJE'TQSDJH
1040 A$(5) = "B'BLEFQJH'GSFN'NZ'TMVNCFST'.....J'DSCU'TP6UMZ'GSFN'NZ'C
1050 A$(6) = "J'IFQUNZ'DMPTFE'UIF'XJOEPX'.....BOE'DSVTIFE'J'T'CLIF'FEZ'1
1060 FB$ =
1055 PRINT "[CLS][BLU]"
1060 FOR I=1 TO 6
1070 FOR J=1 TO LEN(A$(I))
1080 PRINTCHR$(ASC(MID$(A$(I),J,1)))
1090 FOR I=1 TO 500:NEXT I
1100 NEXT J
1110 NEXT I
1120 PRINT:IF I/2=INT(I/2) THEN PRINT
1125 FOR K=1 TO 1000:NEXT K
1130 POKE 36879,24+I:NEXT I
1140 POKE 36879,110
```

— for the Unexpanded Vic
by A. Baker

HOW TO USE EASY ENTER

COLOUR CODES

[BLK]	— press CTRL and 1	[ORG]	— press CBM key and 1
[WHT]	— press CTRL and 2	[BRN]	— press CBM key and 2
[RED]	— press CTRL and 3	[L RED]	— press CBM key and 3
[CYN]	— press CTRL and 4	[GR1]	— press CBM key and 4
[PUR]	— press CTRL and 5	[GR2]	— press CBM key and 5
[GRN]	— press CTRL and 6	[L GRN]	— press CBM key and 6
[BLU]	— press CTRL and 7	[L BLU]	— press CBM key and 7
[YEL]	— press CTRL and 8	[GR3]	— press CBM key and 8

COMMODORE GRAPHIC CHARACTERS

PRINT WHITE	□	FUNCTION KEY F2
CURSOR DOWN	↓	FUNCTION KEY F4
REVERSE FIELD ON	◻	FUNCTION KEY F6
HOME	⏴	FUNCTION KEY F8
PRINT RED	◼	PRINT BLACK
CURSOR RIGHT	→	CURSOR UP
PRINT GREEN	◼	REVERSE FIELD OFF
PRINT BLUE	◼	CLEAR
FUNCTION KEY F1	⏴	INSERT
FUNCTION KEY F3	⏴	PRINT PURPLE
FUNCTION KEY F5	⏴	CURSOR LEFT
FUNCTION KEY F7	⏴	PRINT YELLOW
		PRINT CYAN

OTHER CODES

[CU]	— press 'cursor up' key
[CD]	— press 'cursor down' key
[CL]	— press 'cursor left' key
[CR]	— press 'cursor right' key
[HOM]	— press HOME key
[CLS]	— press CLEAR key
[INS]	— press INST key (Insert)
[REV]	— press RVS ON key (CTRL and 9)
[OFF]	— press RVS OFF key (CTRL and 0)
[SPC]	— press spacebar
[C > key]	— press CBM key with specified key
[S > key]	— press SHIFT key with specified key

EXAMPLES:

[SPC]	— press spacebar three times
[CD]	— press 'cursor down' key five times
[C > F]	— press SHIFT key with 'F'



```

640  FORT=1T0200: NEXT
645  IFRP=1 THEN 650
646  RP=RP+1: GOTO 605
650  IFLV=0 THEN 660
652  LV=LV-1: Y=70: X=24: FG=0: GH=0: TY=0: RP=0: POKEV+16, 0
655  IFB=6 THEN 660
656  POKE 198, 0: GOTO 405
660  PRINT CHR$(147): POKEV+21, 0
665  PRINT "[3CD][3CR]MISSION FAILED"
666  PRINT "[3CD][3CR]ANOTHER MISSION ?"
668  GET Y$: IF Y$="" THEN 668
669  IF Y$="Y" THEN FG=0: GH=0: TY=0: GOTO 250
700  PRINT "[CLS]": END
701  PRINT "[HOM][17CR][15CD]"; CN: "*" * B
705  PRINT "[17CR][CD]"; B * CN: SC=SC+B * CN
06  X=24: Y=70
707  FORT=1T0500: NEXT
708  FG=0: GH=0: TY=0: POKEV+16, 0
709  PRINT "[ORG][HOM][17CR][15CD]@@@@@@"
710  PRINT "[16CR][CD]@@@@@@"
715  GOTO 375
1001 DATA 0, 0, 0, 15, 31, 62, 110, 206, 0, 0, 0, 240, 248, 124, 118, 115, 0, 0, 0, 255, 255, 60, 60, 60, 60
1002 DATA 0, 96, 224, 248, 252, 248, 248, 252, 252, 252, 248, 252, 254, 248, 72, 0
1003 DATA 63, 63, 127, 47, 31, 11, 0, 0, 0, 26, 63, 31, 127, 63, 63
1004 DATA 254, 254, 252, 248, 254, 252, 254, 252, 127, 127, 95, 79, 79, 127, 79, 127
1005 DATA 0, 0, 195, 239, 255, 255, 255, 255, 255, 255, 255, 255, 255, 251, 145, 0, 0
1006 DATA 34, 75, 500, 34, 75, 500, -1, -1, -1
1010 DATA 0, 0, 0, 0, 0, 0, 60, 0, 6, 255, 96, 7, 221, 224, 6, 255, 96, 1, 154, 128, 3, 154, 192, 7
1011 DATA 255, 224, 15, 255, 240, 6, 73, 96, 3, 255, 192, 7, 255, 224, 12, 60, 48, 24, 126, 24, 24
1012 DATA 255, 24, 0, 24, 12, 0, 48, 63, 0, 252, 63, 0, 252, 0, 0, 0

```

Mind Boggler

— for the Commodore 16

by Jason Evans and Tony Martin

Jason and Tony have produced a colourful computer version of the old favourite letter shuffling game.

All you have to do is arrange the letters inside the square so that they read "C = COMMODORE USER" leaving the blank square in the bottom right-hand corner. Simple? Just try it.

Full instructions are supplied on-screen. Just type it in and RUN.

```

1 SCNL R
2 A0 NZ$(1)=" " : NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
10 COLOR0,2:COLOR4,2:VOLT
19 A NZ$(0)=" " : NZ$(1)=" " : NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
20 DIMN(3,3):DIMNZ(15)
30 X=0:Y=0:C2$="":C3$=""
40 TP$="":S$="( " : NZ$(1)=" " : NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
50 CX$="":CY$="":CR$="":CS$="":CZ$="":C3$=""
60 CD$="":C2$="":C3$="":C4$="":C5$="":C6$="":C7$="":C8$="":C9$="":C10$="":C11$="":C12$="":C13$="":C14$="":C15$=""
70 BD$="":BR$="":BZ$=""
80 PRINT
105 PRINT"***** MIND-BOGGLER *****"
110 COLOR1,9,4:PRINT"***** CONTROLS *****"
120 PRINT"***** I ***** MOVE LEFT"
130 PRINT"***** P ***** MOVE RIGHT"
140 PRINT"***** Q ***** MOVE UP"
150 PRINT"***** Z ***** MOVE DOWN"
160 PRINT"***** SPACE ***** SHIFT PIECES"
170 PRINT"***** PRESS RETURN TO START GAME *****"
171 PRINT"***** WRITTEN BY TONY MARTIN & JASON EVANS *****"
180 BETA$:IFASC(A$)<>13THEN180
190 NZ$(0)=" " : NZ$(1)=" " : NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
200 NZ$(1)=" " : NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
210 NZ$(2)=" " : NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
220 NZ$(3)=" " : NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
230 NZ$(4)=" " : NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
240 NZ$(5)=" " : NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
250 NZ$(6)=" " : NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
260 NZ$(7)=" " : NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
270 NZ$(8)=" " : NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
280 NZ$(9)=" " : NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
290 NZ$(10)=" " : NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
300 NZ$(11)=" " : NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
310 NZ$(12)=" " : NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
320 NZ$(13)=" " : NZ$(14)=" " : NZ$(15)=" "
330 NZ$(14)=" " : NZ$(15)=" "
340 NZ$(15)=" "
350 FORI=0TO3:FORJ=0TO3:N(1,J)=1+4+J:NEXTJ,1
360 PRINT"***** MIND-BOGGLER *****" : GOSUB550
365 PRINT"***** C = COMMODORE USER *****"
370 X1=0:Y1=0:X=0:Y=0:Z=20+INT(RND(0)*25)
380 FORJ=1TOZ:X=INT(RND(0)*4):GOSUB620:Y=INT(RND(0)*4):GOSUB620:NEXTJ
390 COLOR1,3,3:PRINTCD$;CR$;" " : C2$;C3$;C8$;" " : X=0:Y=0
400 BETA$:IFASC(">") : "ANDA$(">")P"ANDA$(">")I"ANDA$(">")Q"ANDA$(">")Z"THEN400
410 IFA$=" " : "AND (X1=XDRY1=Y) THENGOSUB620:GOTO400

```


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INVERTED VIDEO ON THE COMMODORE 64



Ever tried making a coloured object move across a multi-coloured background, using Basic? It's pretty tricky. So Jim's come to the rescue with a technique called Inverted Video. There's also a type-in game to show you how it works.

by Jim Butterfield

Those of us who've played around with video effects on the Commodore 64 know that "plane" video involves one background colour and a choice of printing colours. In other words, we can choose to print green, red, and yellow on a white background; but we can't go the other way and print, say, white on a multicoloured

background. But we can get this effect easily by using a trick.

Here's the objective: we want to make an object move over a textured background. Maybe it's a small black bug flying over a terrain which is green (grass), blue (water) and white (ice). We don't want the bug to change colour as it passes these areas; it must stay black.

Yet the 64 seems to be set up to work the other way: the foreground colour may change from one character cell to another, but the background must be one solid colour across the whole screen.

There are many special features that we could call into play to get around this "solid background" problem, of course. Extended colour mode (we used it last month) allows us a choice of backgrounds; it's attractive for many uses and too little used by most programmers. Sprites may be placed anywhere on the screen, over existing patterns, giving the "colour over colour" effect. We could even go into a split screen technique to do multiple backgrounds; it would be complex, but might do the job.

But we *can* achieve the effect without calling in special features. To invert the screen workings, we must invert our thinking — no, don't stand on your head.

Upside-down

When I was a small child, I used to think that stars were tiny holes in the black curtain that covered the sky at night; in other words, they were chunks of light shining through. I couldn't tell the difference between a white source set against a black background, and a white background shining through a black covering foreground.

That's the technique we'll use here. Since we have one background colour and a choice of many foreground colours, let's flip them over so that we have one "foreground colour" against a mixture of many "background" colours. We'll have to work in reversed characters, of course, to switch background and foreground, but that's no problem.

Let's try a simple example. We want a white letter A to move over a multi-coloured background. Here goes:

```
100 PRINT CHR$(144); CHR$(147)
110 POKE 53281,1
```

This clears the screen (147) and sets the colours; background to white (53281) and cursor to black (144).

```
120 FOR J=0 TO 39
130 POKE 1024+J,160
140 POKE 53296+J,RND(1)*14+2
150 NEXT J
```

We poke reverse spaces (160) to the top line of the screen, and put random colours into the colour byte table at 53296. Note that we need reverse spaces; ordinary spaces would just show the background colours. These colours will seem to be background, because they won't change.

```
160 FOR J=0 TO 38
170 POKE 1024+J,160
180 POKE 1025+J,129
190 FOR K=1 TO 100
200 NEXT K,J
```

These are the final lines of the program. They make a white letter A move across the top line of the screen, left to right. The screen code for A is a value of 1, but we add 128 to get a value of 129, that's a



Paint the house completely before returning to the garage

```
100 PRINT "CL331CDBHOUSEPAINTER(128PC)-125PC3JIN BUTTERFIELD"
110 PRINT "FUNCTION: KEYS TO MOVE THE BRUSH."
120 PRINT "1:SPC1YOU'RE NOT ALLOWED TO PAINT OVER
130 PRINT "AN AREA ... SO DON'T PAINT YOURSELF
140 PRINT "INTO A CORNER."
150 PRINT "1:SPC2YOU HAVE FIVE MINUTES, 1:SPC3G J LEAVE THE
160 PRINT "PAINT BRUSH IN THE RED SHED WHEN
170 PRINT "YOU'RE FINISHED, 1:SPC4PRESS ANY KEY TO GO.
180 FOR J=1 TO 254:GET X2:IF X2=1 THEN NEXT J
190 DATA 3,0,14,8,39
200 DATA 7,0,20,0,70
210 DATA 7,8,9,15,18
220 DATA 3,15,17,13,15
230 DATA 3,16,18,25,27
240 DATA 3,17,20,19,21
250 DATA 3,18,20,31,33
260 DATA -1
270 PRINT CHR$(159);CHR$(147):WAIT (CHR$(142);CHR$(8));POKE 53280,1
280 GOSUB 500:GOTO 1024
290 REM
300 READ C1:IF C1=0 GOTO 400
310 READ V1,V2,H1,H2
320 FOR J=V1+40 TO V2+40 STEP 40
330 FOR X=C0+H1 TO C0+H2
340 POKE X,C
350 NEXT X,J
360 GOTO 370
370 FOR J=52+4 TO 58+999:POKE J,160:NEXT J
380 FOR J=C0 TO C0+999
390 IF (PEEK(J+15))=7 THEN N=N+1
400 NEXT J
410 T1=500000
420 V=19:H=12
430 POKE V+H+H2+50,160
440 POKE V+40+H+50,160
450 V2=V:H2=H
460 PRINT CHR$(159);CHR$(10);T1
470 IF T1=500000 GOTO 600
480 T=PEEK(20)
490 GET T1:1=ASC(K)+CHR$(0)
500 IF T1=13 THEN V=V+1
510 IF V=14 THEN H=H+1
520 IF H=15 THEN V=V+1
530 IF V=16 THEN V=V+1
540 IF V=17 THEN V=V+1
550 V=V+1:H=H+1
560 V=V+1:H=H+1
570 P=C0+V+H+H2:IF P=99 GOTO 490
580 C=PEEK(P+15)
590 IF C=7 AND C=0 GOTO 490
600 IF C=7 THEN FOR P5,T=N:N+T
610 POKE P5,C
620 IF C=0 OR N=0 GOTO 490
630 PRINT "WIPER"
640 END
650 PRINT "YOU MISSED 'STRA' NT' SQUARES"
```

Housepainter Program

reversed A. As we move the A to its new position, we make it disappear from its old spot by poking the reversed-space there (value 160).

Now — we know that we're moving a reverse-A along the top line of the screen. And we know that each character is a different, random, colour as we print it. But when we type RUN and watch the program working, we see a white A moving across the top. Why?

Because we're really seeing the white background colour "peeking through" the reversed foreground. The optical illusion is complete: we see a single foreground colour moving across a multi-colour background.

Point your house

We'll use this principle to write a short program called **Housepainter**. It's part game, part puzzle, part coordination exercise, and it's good fun. Go ahead and type it in.

Here's your chance to do some handy-work. You have five minutes to paint the house using the function keys to move the brush. F1 moves up, F7 down, F3 left and F5 right. You are not allowed to paint over any area, be careful and plan your work. By the way it is possible, although you may have a lot of trouble at first.

The program is entirely in Basic, which means that there's a pause as it sets up the screen. You may read the program and study how it draws the house by means of a series of rectangles defined in DATA statements.

Note that the characters showing the time in the upper left hand part of the screen seem normal, but are really in reverse font, the white is the background colour peeking through. Similarly, the white paint itself — and the circular brush — are really background.

That's how the white brush can move inside a red shed and across a yellow house: it's not magic, it's inverted video.

Six of the best?

Latest utilities for the 64 and 16

by Ken McMahon

There's no stopping them, software houses are determined to make you do more with your Commodore micro. The 16 has just spawned its first word-processor and a music program. For the 64, there's Activity Centre, a package for star gazers, a typing tutor and yet another extended Basic. What more do you want?

Music Master for the 16

Music Master, from Supersoft, enables you not only to play tunes on the C16's keyboard, but record and edit them.

The lower portion of the main screen displays a replica of a piano keyboard labelled with the corresponding key on the C16. When a key is pressed the note sounds and a blob appears on the relevant key. The frequency of the note (in Hertz) is also displayed alongside the relevant voice indicator.

As well as changing the octave it is also possible to vary the envelope of the tone using attack, decay and sustain parameters. This affects the final form of the tone and makes it possible to produce for example a violin or flute type sound.

Unlike the Commodore 64, the 16's sound chip doesn't have an envelope generator, it's implemented by Music Master's software. This means it's not as versatile as it might be. But to be honest I was surprised to find it at all.

Recording and editing is done on the aptly titled music screen. Here again we have the keyboard replica, but on the top half of the screen is a sort of scrolling staff on which the notes are recorded as you play them. There are two channels which can be recorded separately, then played back simultaneously.

There are a number of editing functions which enable you to alter the final product in much the same way you would alter text with a word processor. Blocks of notes can be replicated, making it easier to record music with repeats, or set up drum sequences.

The transpose command raises or lowers all the notes in a particular block a semitone at a time. You can produce some interesting effects using the bounce command. This copies a piece of music from one channel to another. Having done this you can make alterations to the second channel, then play the two back in unison.

In case you need some help to get the creative juices flowing there are ten built-in backing rhythms, one of which can be user defined. You could use these for example to provide a drum backing. The only problem I found was that this tended to corrupt my accompaniment, causing it to beat in time with the backing. There



the on-screen keyboard in Music Master corresponds with two rows of keys on the C-16

didn't seem to be any easy way around this problem.

Once you've created your masterpiece you can save it to disc or tape and even use it in your own programs. To help you on your way the manual includes two programs to read and play Music Master files.

Given the paucity of the C16's sound capabilities, compared with the 64, it's a tribute to programmer Nick Higham that he's managed to produce such an excellent synth program.

- Music Master (C16)
- Supersoft
- Winchester House
Canning Road
Wealdstone, Middx
01-861 1166
- Price £12.95 (tape)
£14.95 (disk)

Extended Basics

I'll be honest about extended Basics, I've never actually used one; Simon is a total stranger to me. Having messed around with MCT Basic, from Micro Component Trading, for the last couple of hours I find it hard not to be enthusiastic.

What MCT Basic does is to upgrade the

64's paltry Basic V2.1 to the superior V3.5, implemented on the C16 and Plus4. This gives you the best of both worlds — a superior machine with superior Basic.

It's just not possible to include all the extra functions and commands that MCT Basic provides, so I'll concentrate on a few of the more useful ones.

The most unforgiving thing about the 64's Basic is that it provides no easy method of creating graphic displays or manipulating sprites. MCT provides you with four graphic modes ranging from the usual text mode through to multicolour hi-res including a mixture of both on one screen. When in hi-res mode you can take advantage of the graphic commands *draw*, *box*, *circle*, and *paint* which need no explanation.

Game fends can take advantage of the sprite commands to define, enable, and move sprites. Similarly, the 64's renowned sound can be accessed from Basic using the *Sound* command. As on the 16, this has three parameters: channel, pitch, and duration. The ADSR envelope can also be defined.

MCT Basic also includes a number of programming aid commands. Among the most useful are automatic line numbering and renumbering, and *Tron*, which displays line numbers as they are executed, enabling you to trace the program flow. Existing Basic commands like *Print*, *If*

Then, Restore, and the string functions are extended, making them a good deal more powerful.

I could go on for ever: joystick commands, disc commands, a machine code monitor. MCT Basic also comes with a free program, *Screen Painter*. Written in MCT Basic, it's a screen drawing and painting utility.

Not having used other extended Basics I couldn't honestly say MCT's is the best, but it's hard to see how it could be improved upon. If nothing else it provides compatibility with C16 and Plus4 software, so you could for example type in C16 listings from the program section in *Commodore User*. It's unlikely however that C16 commercial software would run as it's likely to contain machine code.

At £10.95 this is one of the cheapest extended Basics worth the name and excellent value for money.

- MCT Basic (C64)
- Micro Component Trading Group House
- Fishers Lane
- Norwich, Norfolk
- 0603 633005
- Price: £10.95 (tape)

Text is formatted on the screen as you type — the WYSIWYG method as it is known, meaning literally that what you see is what you get, text is printed out exactly as it appears on the screen.

The width of your page is thankfully not limited to the C16's forty columns, but can be set to a maximum of 160 characters and text scrolls to the left as you type. Similarly page length can be defined to a maximum of 248 lines.

Due to the limitations of the C16's memory you can't actually have a page of maximum dimensions. About 8K is left for text storage which will hold about a thousand words or two A4 sized pages. Word Perfect is therefore probably more suited to the avid letter writer than the aspiring novelist. But it should be possible to produce lengthy documents by saving them in small chunks to disc then loading and printing them sequentially.

Text editing is carried out in 'control mode' by pressing the shift and control keys. Once in control mode it's possible to insert, delete, move, copy, erase, and reformat text. A search facility is also available, which pinpoints a particular string of characters within the body of the text. Other standard functions such as tabulation and centering are also included.

There are a few things missing like

DEL reformats a paragraph.

Some of the functions are tedious to use; text has to be copied a line at a time each one involving about four separate key depressions. In many cases it might be quicker to type it out again.

These objections aside, Word Perfect is a neat little program. At the bargain price of £13.95 you'd expect it to be a little rough around the edges.

- Word Perfect (C16)
- Supersoft
- Winchester House
- Canelling Road
- Weddstone, Middx
- 01-861 1166
- Price: £12.95 (tape)
- £14.95 (disk)

Type it right

Precision Software claim that their *Super Type* keyboard trainer, for the 64, will have you touch-typing inside ten hours. That strikes me as being a touch optimistic, but there's no doubt that the Commodore 64 is ideally suited to this sort of application.

Apart from the software, *Super Type* consists of a ring binder manual which you can sit and upright on your desk and a set of various coloured markers. These serve two purposes, by sticking them over your 64's keys you can't cheat by peeking. Secondly each key is colour coded, making the learning process easier and speedier.

The manual consists of exercises designed to build up your skill as using particular keys. Each one is accompanied by the relevant software section which is chosen from a menu.

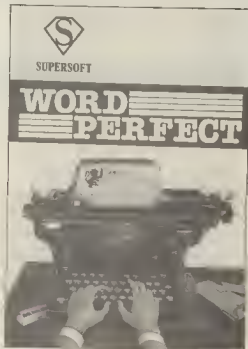
The first menu option is letters and having selected this you type in the exercise from the manual. To begin with this is fairly simple key repetition — *aaa aa aa aa*. On completion of each line, errors are indicated by arrows and the total number is output. Once satisfied with your performance you can move onto words and finally sentences using the same letters.

When the whole exercise is completed you get a progress report that shows how long you took to type the sentences, how many errors you made, your speed in words per minute, and the computer's assessment of your performance which tells the keys you need to practice and which fingers you made the most mistakes with.

Review exercises are included at key points to test everything learned in preceding sections. Finally, there are four consolidation exercises to give you practice on longer pieces of text.

Super Type is a simple idea and one well suited to computer learning. It won't teach you everything, there's nothing for example on text layout or tabulation, but you can get that kind of thing from other sources.

Probably its biggest plus is that it makes typing fun to learn. There's no greater incentive than watching your proficiency improve over a short space of time. Whilst I would dispute



More words for the 16

Supersoft has just released the first word processing software yet seen on the C16. Word Perfect is a simple word processor, yet it incorporates some of the sophisticated techniques of more expensive packages.

Search and Replace and margin justification. But in a package of this price and scope you wouldn't really expect to find them.

One criticism I would make is that Word Perfect isn't the most user friendly WP I've ever seen. The single key commands aren't always the most obvious ones, i.e.,

Precision's ten hour claim, I think a reasonable standard of touch typing could be achieved in a short while.

- Super Type (C64)
- Precision Software
- 6 Park Terrace
- Worcester Park
- Surrey
- 01-330 7166
- Price: £19.95 (tape)



Above: example of the drawing utility on the Activity Centre package

Right: The Star Seeker package — for Sky at Night buffs

Keep your 64 active

The idea behind Activity Centre, from Argus Press Software, is to enable you to design pages containing text, artwork, and animated characters, accompanied by music: "Write, draw, animate, compose", as it says in the blurb.

On loading you're presented with the main menu; from this it is possible to select any of the draw, animate or music options as well as redefine the 'ink' colours. Once a selection is made, the relevant software is loaded from disk and is again operated via its own sub-menu.

Taking the 'activities' in chronological order, draw enables you to create freehand designs on the 64's hi-res screen in three colours. The usual functions such as *erase*, *box*, *line* and *copy* are available. *Fill*, however, will only paint rectangular areas, not circles or irregular shapes.

Moving to animation, this section allows you to define two sprites (yes, only two!) and animate them either separately or as one moving figure. That's really about all the description it warrants.

As everyone knows the 64 has excellent sprite facilities, but these are not exploited to the full here. In fact, what's included is so paltry it doesn't even merit the description animation.

Sadly, the same goes for music. Although you get a choice of several instruments only one of the 64's three

voices is utilised. The method of input is also tedious. Each note must be defined in terms of length and pitch. There is no facility for editing so if you input one duff note you presumably have to start again from scratch.

Having designed each part of your page you can save it, then put them all together to create the whole design which can be output to a printer (not Epson!). Inevitably the mediocre parts fail to create an interesting whole.

Activity Centre covers a lot of ground, none of it well. Better to invest in something less ambitious that does the job properly.

- Activity Centre (C64)
- Argus Press Software
- Liberty House
- 222 Regent Street
- London W1R 7DB
- 01-734 6470
- Price: £14.95 (disk only)

Heavens above

Mirrorsoft's *Star Seeker*, for the 64, is a sort of astronomical database with charts. Basically, it will plot a map of the night sky from any position on the earth on any particular date.

Initially the program asks you to input the location on earth from which you want to stargaze. A table of longitudes and latitudes of major cities is thoughtfully provided in the instructions.

Next you're asked to input the date and time, only dates from 1900 to 2100 are acceptable, but two centuries seems to me to be a fair span.

You are then given the option to view the heavens in any of the four compass directions or directly overhead. Alt-

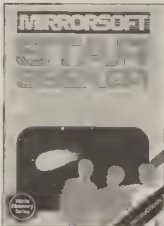
natively, if you're interested in a particular section of the sky, you can input your own bearing in degrees.

Star Seeker will then plot the stars that are visible at the time and place you specified. There are a number of options to elicit further information. A list of the major constellations can be obtained, or the program can draw a constellation map — connecting the individual stars as they move across the sky.

Positioning a cursor over a star and pressing the space bar gives you detailed information on it such as its position, magnitude, distance from earth, etc. If you tire of looking at one particular view, the date, time and direction parameters can be altered from within the program.

Finally, if you want to nip outside and take a look at the real thing, you can produce a printout providing you have a Commodore printer. It's a shame this can't be done on an Epson as it's one of the most useful functions.

An additional program, *Solar System*, is included which provides information on the planets and Halley's Comet in much the same way as *Star Seeker*. Regrettably, my copy had a bug which caused it to hang up whenever I looked at the moon, but I was assured by a Mirrorsoft spokeswoman that the problem has now been rectified. Apart from one or two gaps the manual is well written and contains lots of interesting supplementary information.



If I were to fault *Star Seeker* it would be for the time it takes to plot the maps, it takes *const*! Whilst I can't see it having a wide appeal, *Star Seeker* would undoubtedly be a useful accessory for the budding astronomer.

- Star Seeker (C64)
- Mirrorsoft
- Milton Group Newspapers
- Holborn Circus
- London EC1
- 01-822 3947
- Price: £9.95 (tape)
- £10.95 (disk)



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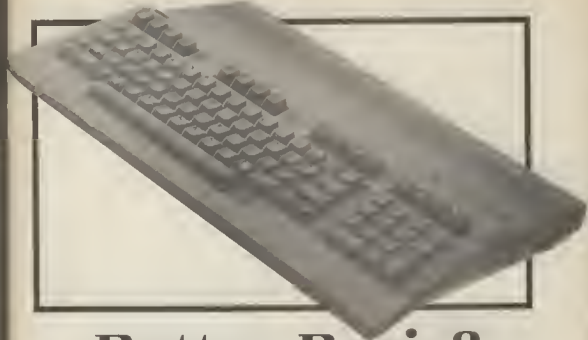
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Better Basic?

An overview of Basic on the Commodore 128

by David Brooks

At last, the Commodore 128 is all set to appear on the UK High Street, offering not just 64 compatibility but a whole lot more. Programmers should be especially attracted by the 128's Basic. Claimed to be the best and most comprehensive version Commodore has ever released, it looks like putting the plodding 64's Basic to shame.

You already know that you can use the 128 just like a Commodore 64. But don't let that tempt you to stay in '64 mode' and miss out on the goodies that 128 Basic offers.

This new version is called Basic 7.0 and it's loaded with useful features that will make programming easier and more fun once you've become familiar with it. Those of you who've used a 64 know that the Basic is probably its weakest feature. It's pretty crude, and since it has no commands for directly accessing graphics and sounds, it extracts two of the 64's best features. Silly isn't it?

The 128's Basic changes all that. It has vastly improved com-

mands in all areas of programming and it includes a whole new set of sophisticated graphics and sound commands.

In this article I'll often be comparing the 128's Basic to that of the 64. Don't worry if you have no previous programming experience. I hope this article will introduce you to some of the important features of any Basic language and whet your appetite for getting to grips with programming on the 128.

New Basic for Old

It's worth pointing out that "Basic" is not just a single language. There are certain fundamental concepts like

PRINT and INPUT that are common to all implementations of Basic. But the many versions of Basic differ significantly in the types and number of commands they contain. 64 Basic may appear simpler at first because there are fewer commands, but, in fact, the lack of certain direct instructions make programming harder than it should be.

The PET/CBM machines that were already widely popular when the 64 was born, had Basic version 4.0 that was much more sophisticated than the Basic 2.0 released with the 64. That weird decision meant that the 64 came off worse, probably because Commodore wanted to protect

the superior specification of the PET machines.

More recently, the Plus/4 and C16 computers were given a new Basic version 3.5 that offered many improvements over Basic 2.0, especially in the areas of graphics and sound. However, none of these machines has the graphics and sound capability that the 64 and 128 offer.

Commodore, of course, knew about the limitations of the 64's Basic and various Basic expanders quickly appeared. However, none of the expansions became accepted as standard equipment for 64 owners. As a result, most published programs, articles, and books about the 64 took the reasonable approach of

relying on its resident language to attract more readers.

So it's three cheers for the 128 which has fluently brought together the best features of all these versions and extensions with the new Basic version 7.0.

It's a language that includes all the Basic 2.0 commands (that is, the entire 64 language), all the disk and file commands of Basic 4.0, and most of the sound and graphics commands of the Commodore Basic expanders and BASIC 3.5, adapted for the increased capabilities of 64/128 sound and graphics.

Although the 128 is truly a "new" machine, mainly because it can operate in three distinct hardware modes, its graphics and sound capabilities are precisely those of the 64. So Basic 7.0 doesn't magically produce any new capabilities that didn't exist on the 64. The difference is that in the 64, these capabilities were inaccessible to the average Basic programmer, while they are much more readily available on the 128. Let's take a closer look at the new language.

A look at Basic 7.0

To make things easy to follow, I've divided the 128's Basic commands into six categories: programming aids, graphics, sound, programming commands, other functions and file handling.

The commands are taken from a preliminary version of the Basic 7.0 Encyclopedia, and maybe changed slightly in Commodore's final product.

Typically, each command consists of the keyword, which I have always given in capital letters, and one or more user-supplied values (arguments). Some of the arguments are required, others are optional. In all cases, of course, the exact command syntax must be followed in order to use the commands.

Programming Aids

The 128 includes several commands that don't add anything to the capabilities of the Basic language but make programming a lot easier. The only such command in 64 Basic is LIST. With 128 Basic, you can have automatic line numbering with AUTO while you're writing your program, HELP with syntax errors while you're debugging it, and automatic line renumbering when you make program changes.

You can trace the operation of your program with the TRON/TROFF commands. You can clear program variables with CLR. The 128 has a built-

in machine language monitor program that can be accessed from Basic with the MONITOR command. RREG defines register values on return from a SYS call.

Graphics

The 128 opens an entirely new world of graphics capabilities to the average Basic programmer. Many capabilities that required an extended Basic or other commercial software on the 64 are now available with built-in Basic commands. The new graphics commands can be divided into several categories.

● **Initialization commands:** COLOR defines a range of 16 colours for each of seven possible colour sources:

No Source

- 0 40-column background
- 1 graphic-mode foreground
- 2 graphic-mode multicolour 1
- 3 graphic-mode multicolour 2
- 4 40-column border
- 5 character colour
- 6 80-column background colour

GRAPHIC puts the 128 into one of six graphic modes:

No Mode

- 0 40-column normal text
- 1 high-resolution graphics
- 2 high-resolution graphics, split screen
- 3 multicolour graphics
- 4 multicolour graphics, split screen
- 5 80-column text

mapped area in memory that can be deallocated with GRAPHIC CLR. You can return to a text format with modes 0 or 5. You can specify the location of the first line of text in either of the split screen modes.

The SCALE command lets you alter the scaling of x and y coordinates on the bit-mapped screen. SCNCLR clears the screen in a specified graphics or text mode. The WINDOW command defines a window within the physical text screen. Although the definition of this command doesn't discuss the point, presumably graphics can be done within this window too.

● **Drawing Commands:** BOX, CIRCLE, and DRAW allow you to construct geometric shapes. LOCATE gives the position of the cursor. You can control the WIDTH of a line as you draw it and PAINT enclosed areas with your choice of colours.

A related command, CHAR, works in either text or graphics mode. It lets you display a string of characters at any specified position on the screen.

● **Sprite Commands:** No graphics language would be

complete without some sprite control commands. First of all, you can define a sprite with SPRDEF. This command works like a sprite definition subroutine, with some prompted inputs to assign the sprite number, define it, and exit back to your program.

Sprite colours are assigned with SPRCOLOR and other attributes are assigned with SPRITE. The sprite image can be saved by transferring its dot pattern to a string variable.

The related commands SSHAPE/GSHAPE save and retrieve rectangular arcs and multicolour or high-resolution screens using Basic string variables. Sprite collision detection is handled with COLLISION and sprite motion is controlled with MOVSPR.

There are several new Basic functions in 128 Basic that deal with graphics (see panel 1).

More sophisticated versions of Basic commonly include several other types of branching commands that help you develop better programming habits, along the lines of what's known as *structured programming*.

Ideally, structured programs written in Basic should contain no GOTO statements at all, as the idea is to handle all possible program branches as they occur, without having to jump to another place in the code. The 128's Basic allows you to come very close to this ideal.

But why bother? Because structured programs are easier to read and understand, and a variety of branching commands allows you to program your logical decisions in a more natural way.

So, in addition to the IF THEN command for making branching decisions, 128 Basic includes IF ... THEN ...

Function	Description
BUMP	determines which sprites have collided since the last check
RCLR	returns the colour source
RDOT	returns the current position or colour of the pixel cursor
RGR	returns the current graphic mode
RSPCOLOR	checks sprite multicolour values
RSPPOS	checks sprite speed and position
RSPRITE	returns sprite attributes
RWINDOW	returns information about the current display environment

Panel One

Sound commands

The 128 gives excellent accessibility to its Sound Interface Device (SID). You won't be able to replace the sophisticated music composing programs available for the 64, but it is now very easy to include sound effects and music in your own Basic program.

You can define the SID's attack-decay-sustain-release (ADSR) parameters with the ENVELOPE command. You can set TEMPO and VOLUME, and you can also set FILTER parameters. Then you can construct a melody and play it from Basic with the SOUND command.

ELSE, BEGIN ... END, and DO/LOOP/WHILE ... UNTIL/EXIT commands.

The most obvious of these is IF ... THEN ... ELSE, because it simply extends the capabilities of IF ... THEN to include all the consequences of an either/or decision in one Basic statement. This command is restricted to a single line of Basic code, but the 128 allows 160 characters in a line instead of the 64's 80.

Sets of instructions that are too long to fit on a single line can be performed within either the IF ... THEN or IF ... THEN ... ELSE syntax with BEGIN/END. Here's an example:

```

100 IF X < THEN BEGIN
110 A=2
120 B=3

```

```

...
190 BEND:ELSE BEGIN
200 A=1
210 B=2
...
250 BEND

```

Aud what about loops? In 64 Basic, the looping instruction is the FOR ... NEXT command. With this command, the number of times the loop is to be performed must be specified in ad-

Programming commands

A major improvement in 128 Basic is its 1525 greater ability to control the way the program flows. It's often the case that programs don't proceed straight through from beginning to end, but must take one of possibly several branches depending on specified conditions. The GOTO, GOSUB, ON ... GOTO/GOSUB, and IF ... THEN are examples of such commands in 64 Basic.

vance. With more sophisticated commands, you could perform operations inside a loop until a specified criterion has been met.

The significance of this takes some grasping. Remember that leaving a FOR...NEXT loop before it's finished (perhaps with a statement like IF...THEN GOTO somewhere outside the loop) is very bad programming practice and can eventually cause your program to crash.

So the 128's DO...UNTIL or DO...WHILE command allows you to perform a set of operations when you don't know in advance how many times you will need to do them, without the problems of incomplete FOR...NEXT loops.

Another welcome addition to 128 Basic is the TRAP command. You know there's no way in 64 Basic to recover from errors detected by your program? Well TRAP, you can plan for certain types of errors and respond to them accordingly with the RESUME command.

Remember what you have to do in 64 Basic is to wait for a key to be pressed?

10 GET Z\$; IF Z\$ = "" THEN

Well, now you can use the single GETKEY command to tell your program to wait for a key to be pressed. You can program the response of function

keys with KEY. You can also build in program pauses without writing empty FOR...NEXT loops with the SLEEP command — cure, huh?

Other Functions

In addition to all the 64 functions and the graphics-related functions defined above, C128 Basic also includes other new functions (see panel 2).

Function

DEC
ERR\$
HEX\$
INSTR
JOY
PEN
PI
POS
POT
XOR

Description

returns decimal value of hex number;
returns string describing error condition;
returns hex number string from decimal;
returns position of one string in another;
returns position of joystick and fire button;
returns X and Y coordinates of light pen;
prints value of pi;
returns character cursor position on line;
returns value of game-paddle potentiometer;
returns exclusive OR of two arguments.

Panel Two

File Handling

The 64 has never quite made it as a 'real' business computer because the 1541 disk drive is so slow. The 128's new 1571 drive

should solve the problem, but you can still use the 1541 with the 128, even in '128 mode'.

Since Commodore peripherals contain their own operating systems, you'd expect the 128's disk commands to be identical to the 64's. They are, but the syntax is easier to deal with. So you get DLOAD, DSAVE, DOPEN and DVERIFY which don't need a device number to indicate they're disk commands.

lets you format a disk, BOOT loads and executes a program and BACKUP — well it does the obvious.

The APPEND command lets you use PRINT to append data to the end of a file, whilst CONCAT merges two files BLOAD/BSAVE loads and saves a binary file into any memory location. Finally, COLLECT makes available disk space that's been allocated to improperly closed files.

So the 128's Basic Version 7.0 is a combination of the best features of existing Basics, and has already prompted the view that it's what 64 Basic should have been all along.

What really matters is that 128 owners now have a complete Basic that lets them use their machine's power to the full without having to buy expensive Basic extensions. And that should make your programming not only easier and more fun, but actually better.

• Next month, we'll be looking at CPM on the 128: what it is, what the 128 can do off-the-shelf CPM software!

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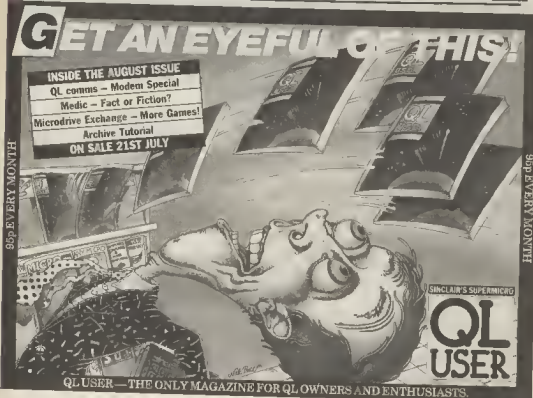
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GO-FASTER DISK

THE TRITON QUICK DISK REVIEWED

by Karl Dallas

The 1541 has endured more than its fair share of criticism for slow speed and dubious reliability. That may not bother the home user too much, but its rather inflated price will. So the Triton Quick Disk at £119.95, looks like being a pretty good bargain. It claims to load and save quicker, and has a built-in tape to disk copy utility.

The drive itself, and its 2.8 inch format, was originated by the Japanese Mitsumi company and is now imported by UK firm, Radofin, who is having them manufactured under licence in Hong Kong. So let's have a look at it.

Exterior looks

The Quick Disk looks a bit like a telephone answering machine, albeit colour-coordinated to the 64. It's squarer but less bulky than the 1541 and has a front-loading mechanism, with a perspex lid, for inserting disks. Round the front, there's a power switch, but there's no sockets at the back.

That's because an interface box is provided that plugs into the user port — the connection is duplicated on the box (apparently versions are also available for MSX and Spectrum machines). The box also has a toggle switch to number the drive as 1 or 2 when two units are used. The drive also needs to be connected to the mains.

The disks themselves have a rigid plastic casing but, unlike the 3.5 inch variety, there's no sliding cover to protect the slot where the head meets the disk. They're still much sturdier than 5.25 inch disks. Disks aren't double-sided but 'flip-over', so you get up to 50K on one side and (flip it over) 50K on the other.

Powering up

Not surprisingly, you turn on the Quick Disk before the computer and then type SYS 327678, which produces the slightly cryptic message: *** C64 T-DOS V1.0 ***.

If you have more than one drive attached (at £120 each, why not?), you'll need to specify which is to be the 'logged-on' drive. This can be changed at any time with a simple direct command. The Quick Disk uses 1 and 2 as drive designators rather than the 1541's 0 and 1 — slightly confusing.

Before you can use a disk, it must be formatted, using the @FORMAT command. By the way, all Quick Disk commands are preceded by the '@' symbol. The disk is formatted into 20 sectors of 2560 bytes each. If a program

just slips into a new sector, the rest of that sector's space is wasted, so careful planning is necessary to make the most of the limited space.

The disk commands

Most of the commands are self-explanatory, and you'll find them listed in the table. But commands like LOAD, SAVE and WRITE do have some more interesting and useful functions.

For example, the @DIR command displays lots of useful information, not just file names and lengths (in bytes) but also whether they're Basic or machine-code (B or M). You're also told how many bytes are left on each side of the disk.

When WRITing machine-code programs, though, you must specify the start and end address. The execution address can also be specified, otherwise the system defaults to the start address.

If you try SAVEing a file under a name

that already exists, an error message warns you that the existing file will be erased if you proceed. Also, you can specify an offset address to prevent something already in memory being overwritten.

It's also possible to LOAD and SAVE data arrays without having to WRITE each element of the array disk, one at a time. The array command ASAVE is very powerful but limited to eight characters; each array can be identified with the usual suffixes indicating string or integer. You can also add REM-type comments to jog your memory later.

Unfortunately, there is no random access facility, so any manipulations, amendments etc., must be done in memory. This means the size of data files is limited by the amount of memory in the machine, after the relevant program has already been LOADED.

Finally, you can COPY files and entire disks, but you must have two disk drives. Funny enough, the MSX and Spectrum systems do this with one disk — why not the 64?



The two 'waferdrives' we reviewed last month aren't true alternatives to the 1541, simply because they don't use disks. Enter the Triton Quick Disk, with its 2.8 inch disk format. It may be non-standard but, at £119.95, it sounds like being a bargain for your Commodore 64 system.

The lack of random access may hinder the Quick Disk as a business tool, but it's certainly a more sensible medium than 'waferdrives' and a good deal faster than the 1541 at a fraction of the price. In short, I liked it.

Next month, we'll be reviewing a true 1541-compatible disk drive, the American-built Enhancer 2000.



Using the Quick Disk

The Quick Disk certainly lives up to its name. It took just seven seconds to load an 16K program, compared with 30 seconds for the 1541 and three minutes for the datasette — pretty good going.

But loading commercial software presents a problem. Despite the @CASSCOPY command, I couldn't find a single game cassette that would copy on to disk. Since nearly all games are protected these days, the utility will become rather useless for avid games players — and for budding software pirates.

Of course, that's not the fault of the hardware: @CASSCOPY happily copied anything that was unprotected. Having prompted you to 'press play on tape', each block of code is verified automatically, with appropriate messages displayed on the screen.

Conclusions

The Triton Quick Disk is a serious storage medium whose speed leaves cassettes and even the 1541 standing. Despite the

copying facility, those of you who want to copy your stock of games tapes onto disks will be severely frustrated.

That problem will be solved only if software houses decide to release their products on the new 2.8 inch disk. So far, no announcements to this effect have been made from neither business nor games software houses. There may be hope, though, since the device is also available for MSX and the Spectrum.

- Triton Quick Disk for the Commodore 64
- Radofin Electronics UK Ltd
- Hyde House
- The Hyde
- London NW9 6LG
- 01-025 0044
- Price £119.95
- very good value

Command

@D1/D2
@ACOPY
@ASAVE"array-comment"
@CASSCOPY
@COPY
@DIR
@FORMAT
@KILL"filename"
@LOAD"program"
@QUIT
@RUN"program"
@SAVE"program"
@WRITE"filename"

Function

to select a different disk drive, if more than one is fitted
to format disk and copy disk to disk (twin-QD system only)
to SAVE an array copy from cassette to disk
copy individual files from disk to disk (twin-QD system only)
to format a disk
to delete a program or data file from disk
to LOAD a Basic or machine-code program or array
to return to normal Basic
to LOAD a Basic or machine-code program and execute it
to SAVE a Basic program
to SAVE a machine-code program or data file

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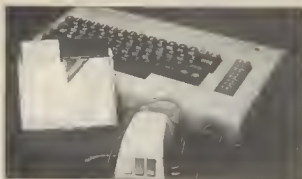
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MOUSE IN THE HOUSE

Connexions

Magic Mouse reviewed

by Chris Durham

A little while ago, the sight of a mouse next to your computer would have sent you running for the mousetrap and the cheddar. Now computer 'mice' are all the

rage. And the Commodore 64 has finally got one, a mechanical rodent that helps you design sprites and graphics. But at £59.95, is it good value?

The computer 'mouse' was originally hailed as the thing that would finally allow the busy executive to make full use of the computer. No longer would he have to learn keyboard skills to get the most from his machine. By moving a mechanical device around his desk, he would make a small symbol move about on the screen.

By pressing a single button when the symbol was in the right space on the screen he could file a letter, read a file or operate a spreadsheet. The word 'icon' was used to describe the small symbol on the screen, commonly a pointing finger.

The mouse may have started life as an executive toy, but they're now appearing in various forms for use on home computers; but just how useful are they?

Magic Mouse costs (£59.95, is made by SMC Supplies and comes complete with software on both tape and disk. The programs allow hi-res graphics, sprite designs and icon designs to be drawn using the mouse. There is also a routine for using icons in your own program.

Mousey looks

The mouse is nicely hand-sized and has three buttons on the front edge coloured red, blue and yellow. The first two are for selecting the various options, while the yellow button is reserved for re-starting programs. The unit is well packed for transport and the first thing that you have to do is to put the rubber ball into the base of the unit and then calibrate it.

The calibration is to ensure that the icon covers the whole screen without disappearing off the right-hand side or bottom edge. There are two small screws underneath allowing adjustments to be carried out. This really only needs to be done once

The software

The software on both tape and disk is identical, except that with the tape you have to load each program separately; with the

disk it is all done from a menu, selected using the mouse, naturally! Both the tape and the disk use fast-loading systems, which has to be an advantage (provided your equipment can cope with the faster data rates).

The hi-res graphics program is similar to those which come with graphics tablets. You select your option from a menu on one page and then swap to the graphics page to do your drawing.

Most of the usual commands are there; you can change brush sizes, dump your creations to disk or printer and select any colour for foreground and background.

The one command I felt was lacking was a 'try again' option, which would erase everything you had done since the last menu access. I have found this invaluable on other graphics packages since it allows you to try something out and then delete it if you don't like it. The only way of removing something from this screen was the 'rub' command, which would also delete what was underneath the error if it crossed anything already on the screen. Apart from that it was quite easy to use.

Although the sprite designer and icon designer programs are entirely separate, they are virtually identical in operation. Both use a grid on the left hand side of the screen for designing the object, the top right hand part of the screen for displaying the object as it will appear on screen and the bottom right area for the 'command' keys.

The icon, which is the standard pointing finger, is moved to the grid and the finger is then made to point at the required pixel position. The red button turns the pixel on while the blue one turns it off. Once you have designed your object you move the icon to the 'command' keys which appear as soon as the icon leaves the grid.

By pointing to the required key and pressing the red button you select the function. The functions include saving the objects to disk, changing the colours, expanding X and Y sizes, erasing objects, etc,

etc. Both programs work well, but there were occasions when two or three tries were necessary to point to a particular pixel. This was not a problem when it came to the command keys since anywhere within the boundary of the key was valid.

The final piece of software sets up an icon for use in your own programs. It loads the machine code routine to create the icon and move it even without your program present. Your program can either be loaded afterwards or can themselves load the icon program; by reading the required PEEK addresses you can calculate the position of the icon at any time. This was very easy to do and it would be possible to create your own icons and use those instead if you wished.

Using your mouse

But one of the first things you discover once you start using the mouse is the amount of clear desk space that you need. A minimum area 10" deep and 9" wide is necessary; similar in size to a piece of A4 paper. Now most home computer users, and I am no exception, do not have unlimited space for all their computer gear. By the time you have a disk drive, TV, printer, disk box and cassette recorder etc, nor to mention the computer itself, there is usually little spare space on the average computer table, trolley or bureau!

My particular desk was just not quite large enough, with the result that I had to keep picking the mouse up and moving it back in order to get the full area of travel.

The second problem I had was that the surface is polished for was once upon a time, unless I kept a fairly constant pressure on the mouse it would occasionally slip without moving the icon, thus reducing the movement I could get without having to pick it up.

I therefore tried it on a number of different surfaces. In every case there was a degree of slippage, even on vinyl.

More from Hampshire

Nick Hampshire is an old hand at writing books on the Commodore 64, having 'revealed' virtually every part of the machine worth looking at. *Advanced Commodore 64 Graphics and Sound* deals mainly with how to introduce extended graphics commands to the 64's puny Basic. That's not to say the sound element has been ignored, some highly ambitious projects have been included.

As I said the bulk of the book is taken up with listings of machine-code routines which add another twenty seven commands to the 64's Basic. These take up over 9K of memory, a fair sized chunk, but of course you don't have to type them all in, you can skip any you don't think are going to be incredibly useful.



If the thought of typing in that much assembly code daunts you, the programs are available on disk for a mere tenner. The initial assembly listings are for patching the new routines into the 64's Basic, naming and tokenizing them, it's therefore essential that these are entered.

Next come the actual routines themselves. These range from screen management routines which configure the various graphics modes, set up colours and define windows, through in two and three dimensional plotting routines, some of which are very powerful indeed.

All of these routines are in CBM assembler format. This means they contain the usual directives such as **BYT** and **WOR** as you shouldn't have too much difficulty converting if you're using a non-standard assembler.

Although the extended graphics section takes up over

half the book there's quite a bit more of interest. A chapter on the theory of high-resolution graphics display contains some interesting programs for plotting and moving 2-D shapes as well as how to design and plot realistic 3-D images. Finally, on the graphics side, some hints and techniques are provided on how to incorporate graphics into games.

Although there is only one chapter on sound in the whole book, it's not the case that the subject has been given scant attention. There are two projects.

The first shows you how to design an interface and software to connect a keyboard to your 64. This task I am assured can be undertaken by anyone with a small amount of electronics experience which excludes me, but it looks like fun.

If you don't have a soldering iron the second section might appeal more. This deals with how to incorporate music into games using interrupt driven routines.

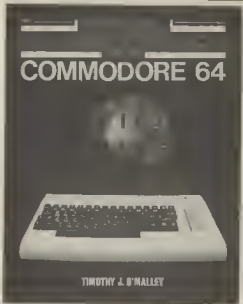
Unlike many so called advanced books around at the moment, Nick Hampshire's actually does contain some complicated techniques and I wouldn't therefore recommend it to the beginner. So don't bother with it unless you feel at least reasonably confident with machine-code. If you do then it's well worth a look.

Ken McMahon

- **Advanced Commodore 64 Graphics and Sound**
- **By Nick Hampshire**
- **Collins Professional and Technical Books**
- **8 Grafton Street, London W1X**
- **£10.95**
- **Definitely one for the advanced programmer**

Artificial brains

Artificial Intelligence is all the rage right now, although not many people know what it is and how far it's been developed. If there is a thinking, reasoning computer out there, the boffins are keeping it pretty quiet — it's



definitely not the 64. Let's look at the book, anyway.

The author begins with an introduction to the concept of Artificial Intelligence (AI) — what it is, how it can be used, and perhaps most relevant, how and why you can run AI programs on the humble 64. I think it was at this point that I began to disagree with him.

Each chapter consists of a brief explanation of the topic under discussion, and then attempts to illustrate the concepts involved by means of Basic programs. Hence, we start with intelligent games, in which Mr. O'Malley goes into the historical and practical details of chess, checkers (draughts to us Brits), Othello, and backgammon — hardly examples of AI.

Following that there are three Basic programs to type in. About the most interesting of these is a program which plots a path through a maze. *Nim*, a game where you have to pick matches from a pile, leaving your opponent with the last one is surprised in its capacity to bore only by the brain numbing *Life*, the third in the trio.

To be fair to the author he has managed to introduce aspects of AI programming into the games, but these kinds of examples are meant to enhance, not detract from the text.

From intelligent games we move onto more serious stuff. Bootstraps — programs which modify parts of themselves as they run, are illustrated with two

stunningly boring programs which do indeed modify themselves, but do little else of practical value. Natural Language processing (making the computer understand English) is a slightly more interesting subject.

This chapter contains a version of *Ethos*, Joseph Weizenbaum's famous program which gives human like responses to phrases input by the user. There is also another good program which runs along similar lines, but draws logical deductions from your input using set theory.

Apart from that one chapter, there is little else to recommend this book to me. The subject would be a lot more interesting if it had been dealt with in greater depth and the program examples do little to rescue it. In fact the two most useful programs in the book are a word processor and a graphics utility, though quite why these have been included I'm not altogether sure.

Ken McMahon

- **Artificial Intelligence Projects for the Commodore 64**
- **By T.J. O'Malley**
- **Tob Books Inc.**
- **A fairly dull, uninteresting book**

"I tell you Harry the August issue of Computer & Video Games is a real knockout!"



"I tell you Harry. The August issue of Computer & Video Games is a real KNOCKOUT!"

"Well, talk me through it Frank."

"O.K. Harry."

"I was tarrn' to go, as I came out for the first, but the exclusive review of the Frank Bruno game really caught me napping. Luckily I was only winded."

Anyway, knock me down. On the next page a great competition to win

Nike Sports gear."

"Saved by the bell, then Frank?"

"You're not kidding Harry."

Dang, and it's out for the second. Blow me if this Oriental chap from Melbourne House didn't catch me with an **Exploding Fist**. Not the sort of thing you expect at the Albert Hall, Harry."

"Apparently it is game of the month Frank."

"But all the same Harry."

"Anyway, the trainer recommends a bit of ducking and weaving. No problem, on the next page was a competition to win a **Casio synthesiser**.

Now I'm really dancing. I jab through the **Max Headroom** interview — real weirdo that one, Harry, and give it the old one-two for the special 12 page **Atari supplement**."

"Ahead on points. I stroll out for the last round."

"Not advisable Harry."

"There's the whole of the **Dallas Cowboys**, **John McEnroe** and **Rocky** \$6 all in the ring together, in a special **C & V.G.** round up of sports games."

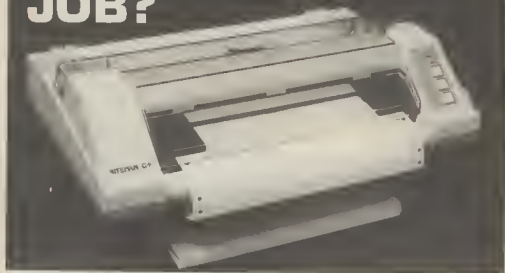
"Sounds like your hardest fight to date, Frank."

"No Harry, hardest one was getting the copy from the newsagent. They were nearly sold out."

DON'T BE THE LOSER.

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RITEMAN FOR THE JOB?



The Riteman C Plus printer reviewed by Bohdan Buciak

Following hard on the heels of last month's review of the Stor SG-10C, comes the new Commodore-compatible printer from C-Itoh, the Riteman C Plus. Not only is it truly plug-compatible but it features a unique design. Looks apart, though, how did it perform?

Companies like Epson and Star used to make dot-matrix printers only for business. Now they're muscling into the home computer market. Japanese printer giant, C-Itoh, is no exception. It's just introduced the Riteman C Plus dot matrix printer especially for the Commodore Vic, 64, 16 and Plus/4 computers. At £240 plus VAT, it's not exactly a budget model but it solves your interface problems and it has an up-marker specification.

Good looks

The most striking thing about the Riteman C Plus is its unusual and unique design. Two folding 'legs' prop up the lightweight printer about three inches above the desktop, allowing continuous paper to sit underneath, thereby saving considerable desk space.

Since the paper feeds through horizontally from the front, the tractor feeds are also horizontal and the print head faces downwards — odd but effective. One advantage of this is that thick papers and envelopes can be used since the rollers don't bend the paper. A print-head

pressure selector on the left lifts and lowers the head for thick paper or for bolder print.

There's the usual panel with buttons for form-feed, line-feed and on/off line, and a clear perspex hood that helps to dampen noise when printing. Round the back, there's two DIN-type serial sockets, so you can link two computers. But there's no Centronics or RS232 port. That may cause problems if you eventually decide to upgrade to a non-Commodore computer.

The specifications

The Riteman prints bidirectionally at a nippy 105 characters per second, using a nine by six needle print matrix, which gives true descenders. Both friction and tractor feed are supported, with the tractor mechanism built-in. Although it's easy to insert paper, the tractor feed clips feel rather flimsy. A simple lever toggles you back to friction feed.

The Riteman prints the complete Commodore graphics set and upper/lower case. Normal print is 80 characters per line, which can be compressed to 132 per line or

expanded to 40 per line by setting the DIP switches, located reasonably enough under a screw-off panel at the top of the printer.

There's a double-strike facility, reversed characters, super- and sub-scripts and a bit image graphic mode. Line spacing and various international character sets are also selectable. The Riteman also has a one-line buffer.

Unfortunately, the ribbon is similar to that rudimentary system used on Commodore's now-defunct 1515 model — a self-making loop running between two holders, with the print head moving it along as it prints. It works well enough but looks rather makeshift.

Print it out

So let's plug it in and go. The Riteman works in two modes. Standard modes 1 and 2, and Plus mode, selectable by changing the DIP switch positions. The former two print in upper/lower case and in graphics mode. So you'd use them for program listings, printing graphic codes and characters and for hi-mapped graphics.

Print quality is good since the machine

uses its double-strike facility when it meets a graphic. All the codes are sharp and well-formed. The trade-off, though, is a loss of speed if your program contains lots of them.

Plus mode is used in conjunction with software such as wordprocessors, filing packages and spreadsheets — anything that involves printing out text. Setting a DIP switch gives 80 or 132 column option — 132 columns being useful for condensing a large spreadsheet onto A4 paper. Generally print quality is up to good dot matrix standards but falls short of near-letter quality.

A word of warning: there's so much software on the 64 that it wouldn't be possible to test the Riteman with all of them. The Riteman performed with everything we threw at it, with a couple of exceptions. So it's really up to you to get a comprehensive demo before you commit yourself.

Documentation

Once again, we've got a badly translated manual. Not only that, there's a large 'errors' sheet — neither inspire confidence.

Installation and setting up is handled well, mainly because the drawings are

good. But the manual fails to impress with its descriptions of the various CHR5 control codes and the example Basic programs.

Standard modes 1 and 2 codes are comprehensible but Plus mode causes real problems with its use of ESCape codes both in decimal and hex. You must work out for yourself that you must use the alphanumeric equivalent of the code given, and what syntax to use. By the way, the difference between Standard modes 1 and 2 is never really explained. My guess is that it's something to do with secondary addressing — but it should have been made clearer.

Conclusions

It's difficult not to compare the Riteman with the Star SG10C (reviewed last month) which performed better in most respects, admittedly for £20 more. On the bright side, the Riteman is smaller, lighter and unusually well designed — and it's pretty quiet. But the print quality, documentation and generally flimsier feel make it that bit less attractive.

- Riteman C Plus printer
- C.Roh Electronics Ltd
Beacon House
26/28 Worple Road
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Chessmania	60	CRIMINAL MINDS	8.95	3.95
Chessmania	61	CRIMINAL MINDS	8.95	3.95
Chessmania	62	CRIMINAL MINDS	8.95	3.95
Chessmania	63	CRIMINAL MINDS	8.95	3.95
Chessmania	64	CRIMINAL MINDS	8.95	3.95
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THREE PIECE SUITE

Triangle, Superscript-64 and Powerplan reviewed by Karl Oallas

New business packages for the Commodore 64 are piling into our offices thick and fast. This month we're looking at Triangle, an incredibly cheap integrated wordprocessor, spreadsheet and file manager, the new Powerplan spreadsheet and graphics program and the equally new 64 implementation of Superscript.

Integration on the cheap

The most important news about the incredibly inexpensive Triangle package from Argus is that, for once, here is something that really lives up to the blurb on the cover. A neat, businesslike package that really does allow you to work on a word-processed document, a spreadsheet and database file one after the other, and to transfer files between them.

It isn't quite Lotus Symphony, of course, but if one compares it with the ill-fated Three-Plus One software within the ROM on the Plus/4, the extent of the missed opportunity there becomes only too obvious.

Each of the three modules is quite a respectable implementation. The wordprocessor allows up to 400 lines of text to be entered and for one file to be linked with the next on printing, so an entire book could be handled, if you have ambitions in that direction.

The spreadsheet is of medium size: 40 columns wide by 60 rows deep, but it has all the necessary commands, including col-

umns of differing widths (from 2 to 36 characters wide), windowing, and relative addressing within formulae.

This means that a formula can refer to others by putting a minus or plus figure within brackets, e.g. (-2) refers to a cell two rows higher, (+3) to one three rows lower.

This is handy, but not so useful as the choice of absolute/relative which Visicalc offers you when a formula cell is moved or copied.

A block of a spreadsheet can be SAVED as a document for merging with word processing, but it is important when defining the block width to ensure that it isn't wider than the WP software can handle.

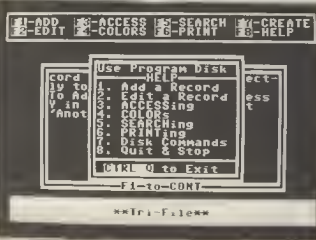
The main function of the file manager is obviously to act as a mailroom facility and it is admirably suited for this purpose. Each record may not exceed 230 characters, and each field has a limit of 29 characters. There is a limit of 17 fields per record.

Searching on two fields is permitted (field keys may be partial, i.e. the first few letters of the field) but there is no browse facility. So while there is a specimen file on the disk, it's hard to find your way round it without knowing what you're looking for. The manual contains no information about the disk contents.

Switching from one program to the other is not exactly instantaneous: from WP to spreadsheet took 37 seconds, from spreadsheet to WP 47 seconds, and from spreadsheet to file manager about a minute. This is because each new program has to be changed from disk. You lose any text in memory at the same time.

The word processor will not please the 'what you see is what you get' brigade, since it does not attempt any kind of word wrap, meaning that words are broken when they fall across the end of one line and at the beginning of the next. The screen display is 39 characters wide and a display at the bottom indicates your line number (starting, confusingly, at 000) and column position.

Triangle's file manager program integrates with the spreadsheet and WP.



This failure to indicate what things are going to look like is particularly noticeable when a spreadsheet block is incorporated into text, since the columns wrap round if the area merged is wider than 39 characters.

The 14-page manual is remarkably clear and easy to follow, the only real lack being any reference in the demo files. Even with out the manual, the three modules are very easy to use, being amply supplied with mnemonic commands, displayed on screen. Multiplan-wise, plus help windows, which pop up whenever F8 is pressed. Sometimes, further sub-windows are nested within windows for further information.

Disk commands, like directory and formatting, can be accessed from within the program, which is useful.

All in all, this is a £20 package that is so cheap yet so useful that it's going to be hard to beat.

- Triangle
- Argus Press Software
Liberty House
222 Regent Street
London W1R 7DB
Tel: 01-439 0666
- Price £19.95 (disk only)

Superscript for the 64

After literally thousands of 64 users have learnt the rudiments of what makes a good word processor from the EasyScript package supplied with the 1541 disk drive, the end of their bundling agreement with Commodore has allowed Precision to upgrade the package with the new **Superscript 64**, taking into account the improvements incorporated in the versions for the Commodore 8000 and 700 series business machines.

In fact, this new version of Superscript is in many ways more powerful than either of the two business versions, and the C128 implementation is designed to sit alongside their Superbase file managers to provide just about the most powerful integrated package available for any machine — including the new Commodore PC.

Interestingly, Precision have decided to concentrate on developing the C128 versions rather than to adapt the package for the PC, as some of their competitors (Viza, Handic) have done.

The first big improvement that will be obvious to any user, whether they've had experience of EasyScript or not, is that the new one is entirely menu-driven, so that it is possible to operate the program without constant reference to the excellent ring-bound (but numbered — shame!) manual.

In any case, pressing F8 will produce a help screen at any level, if the mnemonics are not clear enough for you.

The menu is accessed by pressing F1, and each menu choice usually produces a sub-menu of more detailed choices. For instance, if F1 is pressed from the edit mode, the following menu appears along the top of the screen:

GO ERASE PRINT DOCUMENT
SET TAB
LAYOUT QUIT CALC FEATURE
HELP

You can move the menu cursor along to the option you want, then press RETURN, or you can just press the initial letter of the chosen option, so that pressing G for GO will produce the following sub-menus:

START END TOP BOTTOM LEFT
RIGHT

NUMBER UP DOWN PREVIOUS
for moving around the screen. After a short time, the user learns the key sequences almost without trying, so that F E-S will move the cursor to the beginning of the text, and though the menu may flash up along the top of the screen while the keys are being pressed, scant attention is paid to it.

Any key sequence can be repeated immediately, and at superfast speed, by pressing CTRL and R immediately afterwards. This will always repeat the most recently used menu key sequence.

Two other improvements are the pro-



Superscript 64 — a radical improvement on the popular EasyScript.

vision of a calculator function and the fact that the spelling checker is now an integral part of the program. Up to 10 decimal places can be defined (2 are the default) and it is possible to multiply, divide, add or subtract (down columns or along lines), and either insert the result into a document or hold it in memory for display when required.

The spelling checker comes with a 30,000-word master dictionary (the program disk offers US and UK options, one of which is copied to the working disk on setting-up the system), and a document in memory can be checked at any time. Any unknown word is highlighted and you choose whether or not to incorporate it into the dictionary.

There is also a *Word Search* function which allows the user to type in a word the spelling of which is uncertain, and all similar words will be displayed to help you get a right. Wildcard characters (?) and (*) can be used in the usual Commodore way when typing in the parameters of the word to be searched.

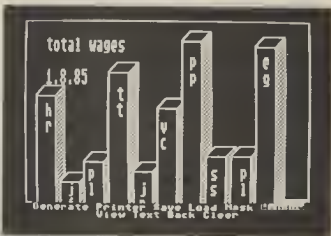
Though documents can be word-

wrapped on screen, like EasyScript before it. Superscript 64 does not offer a WYSIWYG display, though since the screen width can be configured for any number of characters between 40 and 240, something very like the finished appearance can be obtained, if the screen width is set equal to the desired printed width.

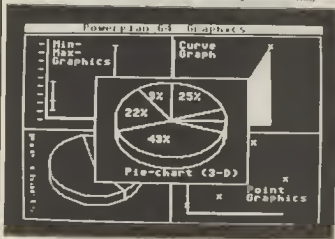
If the screen width is over 40 characters, then horizontal scrolling is employed when the typist goes past the rightmost limit.

Presumably, the G128 version will allow the 80-column screen model to be employed. Since most print-outs have a width of less than 80 (75 characters wide is usually best), this ought to obviate the necessity for sideways scrolling.

Insertion of print-formatting characters will change the look of the displayed page, and the more you use the less like the finished result will the screen appear, but there is a View Document option, which strips away all the formatting, and shows the document more or less as it will be for-



Bar chart showing 3D and text facility



Powerplan offers a variety of graphic displays

matred, highlighting special features like underline, bold, expanded and condensed type, subscripting and superscripting.

Although Superscript 64 can read and reformat EasyScript files, the process won't work the other way.

This program offers a very superior product at a more than reasonable price. While EasyScript users will find it very easy to upgrade, the way it works is ideally suited to the absolute beginner, and apart from the lack of an index, the manual is a model of how such things should be written and explains anything that isn't immediately obvious.

- Superscript 64
- Precision Software
- 6 Park Terrace
- Worcester Park
- Surrey KT4 7JZ
- Tel: 01-330 7166
- Price: £69.95 (disk only)

Spreadsheet with graphics

Though it describes itself as a "table calculation" program, Powerplan is actually a reasonably priced, mid-power spreadsheet with a useful graphics capability, able to produce bar charts, curve graphs (including multiple curves), point-to-point graphs, an interesting chart they call a "mini-maxi graph", and pie charts.

Combining the graphics pack with the capacity for up to eight windows on screen at a time allows several graphs to be viewed simultaneously.

It is configured for a choice of three classes of printer: MPS 801, CBM 1525, or CBM 1526 or Epson FX80 or RX80. There appears to be no way of modifying the configuration of any of these to a printer which is marginally different, for instance a Starline, which is a basic Centronics-type machine, rather like an Epson, but without its graphics capabilities.

The program is menu-driven, and most of the mnemonics are fairly obvious. The worksheet itself is average size comprising a maximum of 63 columns and 255 rows, giving a total 16,065 compartments.

The German origin of this package is evident in the meticulous organisation of the manual, which is really very detailed, though some of the translations have lost some clarity in the transition to English.

There are also some discrepancies between what the manual says and what is seen on the screen: to start planning a graph, once the graphics module has been loaded, you have to press G for Generate, not D for Draw-up, as the manual says, and the option for getting rid of the menu to see the finished graph is V for View, not L for Look.

Also, the option to use double-height labels is rather misleadingly described as Capitals (which it isn't) and as "double-length" rather than double-height.

There is also a useful "sideways" option which can be employed to label bar charts down their vertical length.

Though First also publish two other German programs from the same author, First Base and First Word, there is no option to transfer data between Powerplan and them, though the word processor and file manager can swap data between them.

Moving from the spreadsheet to graphics mode and back again is rather slow, taking about two minutes, though in the graphics mode the spreadsheet in memory can be looked at, though not modified in any way.

As a graphics package, this doesn't compare with the likes of Vizastar, say, but then it's about a third of the price.

- Powerplan
- First Publishing Ltd
- Unit 20B, Horseshoe Road
- Horseshoe Park
- Pangbourne, Berks
- Tel: 07357 5244
- Price: £44.95 (disk only)



Tommy is Commodore User's resident know-all. Each month he burrows through a mountain of readers' mail and emerges with a handful of choice queries. The result, before you, is a wedge of priceless information and indispensable advice. There's even the odd useful tip as well.

Tommy's Tips

X = number or variable to be printed > :GOSUB 1000
The following code should then be included as a subroutine in your program:
1000 IF X<0 THEN
X=X+1
1005 X\$=STR\$(INT(X));
IF X=0 THEN
X\$="0"
1010 L=LEN(X\$);IF L<8
THEN X\$=LEFT\$
(" ",8-L)+X\$
1020 X=ABS(X\$);S=INT
((X-INT(X))*100+.001)
1030 SS=","+RIGHT\$(
STR\$(S),2);IF S=0
THEN SS="1.00"
1040 PRINT X\$,SS;
RETURN

to it and I am loading the second by poking New, Load and Run into the keyboard buffer. Is there any way in which I could make it New, load and then run from line 10 onwards (like RUN 10-).
Also is there any way of using an interrupt driven machine code routine to constantly check for a run-stop or run-stop and restore from the keyboard and if they are pressed, NEW the program? These are both for security?

One very simple way is to put a GOTO 10 statement as the first line of the second program, which will have the same effect as RUN 10. Also, rather than poke 'NEW,LOAD and RUN' into the keyboard buffer, just put the line 'LOAD"program-name"' at the appropriate place in the program. This will automatically NEW,LOAD and RUN the program, provided the second program is smaller than the first (if it isn't, you can make the first program look bigger by setting addresses 45 and 46 to the same values as they are for the second program).

As for the second question, the KERNAL jump vectors for the STOP key are contained in memory locations 808 and 809. By directing the vector to your own code you can do a cold start instead of a warm start. This will have the effect of NEWing a Basic program. To redirect the STOP vector completely you must do it in machine code. Basic is too slow. If an interrupt occurred while you were changing the vector it would cause a crash. If you simply want to disable the STOP key then POKE 808,240 or POKE 808,251 will do the job.

Trying to compile

Dear Tommy, I recently purchased Stack's Basic Compiler; for most of my programs it has worked with no problems. However, I have tried to compile a program which uses hi-res graphics from address 8192 to 16191. When the compiled program is RUN, the message 'ILLEGAL QUANTITY ERROR' appears. Apparently, the compiled program is also using the area from about 8000 onwards and I presume that it is 'clashing' with the hi-res area. Is there anything that I can do about this please?

DIY monitor

Dear Tommy, Could you possibly let me know which pins of the Audio/Video port of the 64 should be connected to an external amplifier to improve the sound quality? I consulted the user manual, but the diagram showed a different configuration of pins to the port on my 64. Could you also let me know whether the output is high or low impedance. Thank you.



The pin configuration is as the manual, except that the socket on the computer has several more pins than the diagram. If you ignore the top two pins and the middle pin you will find that the remaining pins are the same as the manual. Audio Out is pin Three and Ground is pin Two. If these two pins are connected by a screened cable as shown in the diagram below, they can be connected to an audio amp using a 'guitar' or 'line' input, rather than a 'mic' input. For a hi-fi amp, you can buy a cable with a 5-pin DIN plug at one end and two phono at the other. Just plug them in and the connection should work.

Auto-run

Dear Tommy, I have a Vic 20 and I am writing a game for it. There are two parts

DIY monitor

Dear Tommy, I have recently acquired a Hitachi 510JNB2 colour monitor from an old arcade machine. Unfortunately it has a five line RGB input (RED, GREEN, BLUE, and probably 2 sync. lines). Could you tell me if there are any products or DIY material available which would allow me to change my composite output from my Commodore 64, to the RGB standard? Your help will be very gratefully received.

I regret that I am not aware of any products available to allow an RGB monitor to be used on a composite video output such as that from the Commodore machines. Neither is there any way of picking up an RGB signal from inside the computer, the signal is generated inside the VIC chip and emerges as a composite signal directly. Unless you know a friendly TV engineer who might be able to convert the monitor (and this could be quite expensive) you will be unable to use it with your 64.

Missing blocks

Dear Tommy, I have been using Easy Script successfully for over a year, but notice that some of my discs are running out of spare blocks more quickly than others. The worst example shows that 388 blocks are missing out of the original 664. What is happening please? Thanks in anticipation of your explanation. I assume that you have deleted some files from these disks

during the course of your word-processing. What seems likely is that although the directory is being updated, the blocks are not being freed for use, i.e. the BAM (Block Allocation Map) is not being set correctly. This is normally done automatically on deletions, however, if the program does block reads and writes then the program must also reset the BAM itself.

Have you tried doing a Validate on the disks that have 'lost' blocks? this should restore the lost areas. If you have been doing any work yourself with Random Access files then this may also explain the problem. It is possible to put data in blocks and set the BAM without any entry appearing in the directory. Again, doing a Validate will restore the blocks, but will destroy any Random Access files in the process.

Neat numbers

Dear Tommy, I'm writing a program for the Commodore 64 to do my home accounts. But I can't get my lists of figures to look neat by having the decimal point in the same place on the columns.

Can you help me?

The easiest way of doing something like this is to regard the number as a string; you can then use all the string manipulation commands to position the decimal point correctly.

What you need is a short print routine which can be called each time you wish to print a number. By putting the number to be printed in the same variable each time before jumping to the routine you can pass the number as a parameter. Replace each print statement for a number with:

I compiled another program which stored data in the area from about 8000 onward. That had Pokes 54,64:Poke52,64 to protect this area. I found that I had to delete these pokes in order to get the compiled program to RUN without causing an "OUT OF MEMORY ERROR". Perhaps this may give a further clue to the problem and its cure.

Unfortunately what you presume is true, the compiled code or possibly the run-time interpreter is occupying the space required for the hires graphics or data above 8000. I do not know the exact method the Sack compiler uses, but I suspect that at least one part of the code will not be relocatable, in which case it can only be used for programs which do not clash.

Part of the problem with compilers of this sort is that they do not produce true machine-code; it is a kind of half-way code which runs under an interpreter that resides in the memory along with it. I suspect that it is the interpreter that occupies this area. Is there a limit to the size of program that can be compiled, since this may give you a clue as well? Basically, when you try to run a program with hires or large amounts of data, you are just making the total size of program plus compiler too big for the 64.

Hi-res blues

Dear Tommy, I have a Vic-20 and 1520 Printer/Plotter. I find both are very good machines. However, I want to print hi-res graphics onto the printer, but I cannot find out whether it is possible, if it is possible how can it be done?

Because of the way that the 1520 works, i.e. using a pen to draw lines rather than printing a series of dots, there is no simple method for dumping a hi-res screen onto the printer. It would be easier to plot the picture at the same time as it was being built up on the screen since the information you need will be available in the program. If you want to dump a screen that has been created using a commercial graphics program (e.g. with a graphics tablet) then I am afraid you are out of luck, a dot-matrix printer is the only real answer for this sort of thing.

Paddle problem

Dear Tommy, I have recently purchased some paddles for my Commodore 64 and have noticed that there is a certain amount of "wobble" when used. Are my paddles faulty? If not could you suggest a routine to remedy this. Could you also suggest a routine in Basic to show when the paddle button has been pressed.

Your paddles are not faulty, it is just that you are trying to read them using Basic. The Analogue/Digital (AD) conversion done by the SID chip is very fast; so much so that it will register any changes in the resistance through the paddles. Basic is too slow to read the values before they change, hence the wobble.

The only reliable way to read them is using a machine-code routine. A Basic loader program for such a routine can be found on page 347 of the Programmer's Reference Guide; something I suggest you purchase if you want to play-around with paddles and things in your own programs. As for the fire button, the following Basic Code will read paddles one and two:

```
1000 P1 = PEEK(56320):
P2 = PEEK(56321)
1010 IF (PIAND2) = 0 THEN
PRINT "FIRE BUTTON A"
1020 IF (PIAND4) = 0 THEN
PRINT "FIRE BUTTON B"
```

To read the other two paddles change P1 to P2. Note that if you use the m/c routine from the PRG then this includes reading the fire buttons.

Know your printer

Dear Tommy, I am a Commodore 64 user and I've got two questions. What is the difference between C-1515, C-1525 and C-1526 (I mean in the commands)? I have heard of ROMs for conversion but I would like to know what codes must be converted because I am an old 1515 user).

The 1515 was the original printer for the Vic 20; it had the old ROM and will not work well with the 64. The 1525 replaced the 1515 and was suitable for both the Vic 20 and the 64 since it contained the new ROM. The 1526 was a more sophisticated version of the 1525, but had a reputation for unreliability.

The problem with the 1515 is

none of the timing, and codes. The 64 has to keep refreshing the screen and the interrupts, to enable this to happen upsets the normal control timing. New ROMs for all the Commodore peripherals were developed to overcome this problem, hence the release of the 1525 printer and the 1541 disk drive.

There are two ways of solving the timing problem on the 1515 when using it with a 64. One is to try to get hold of the new ROM (Commodore might still supply it although I have my doubts); it is a simple case of taking out the old ROM and substituting the new one.

The other much cheaper, but less efficient way is to turn the screen off each time you access the printer (POKE \$3265,11 to turn it off and POKE \$3265,22 to turn it back on again). This is obviously no good when using commercial software unless you can get at the code to alter it, so a new ROM (or new printer) might be the only solution.

Dodgy 16 graphics

Dear Tommy, I wonder if you can help me with a problem I've been having with my Commodore 16. I am trying to write a program that enables me to draw shapes on the screen in hi-res mode.

The problem is that the program has some errors in it which cause it to hang up. As the computer is in hi-res mode (graphic 3) I don't get an error messages displayed on the screen as I don't know what's going wrong.

Also, there seems to be no way of returning to the text screen apart from switching the computer on and off again, thereby losing my program. Please, can you help?

This is a fairly common problem, probably due to the way the 16 was originally designed. There are a number of ways around it, though.

The simplest, although it's a bit messy, is to type a load of garbage on the C16's keyboard and then press Return. You'll then get a syntax error which causes the machine to default to text mode.

Another way round it would be to take advantage of the easy way in which you can program the 16's function keys. You need to program one of these to return you to text mode. Include the

following line at the beginning of your program:

```
KEY1, "GRAPHIC 0" + CHR$(13)
```

In the line above, 'KEY1' refers to the first function key. This is assigned to the command "GRAPHIC 0", which returns you to text mode. The last bit, CHR\$(13), is the code for Return. Now all you have to do when the machine hangs up is press the F1 key and you will be returned to text mode.

Finally, you could use the TRAP command. This is used to trap such errors which occur when a Basic program is executed. Here's one example of how you could use it:

```
10 TRAP 1000
20 — your program —
```

```
1000 GRAPHIC 0
1010 PRINT "ERROR";
ER; "IN LINE"; EL
1020 STOP
```

What's happening here is that TRAP is saying, "if you hit an error, don't stop the program, go to line 1000". When it gets there, it finds the instruction to return to text mode.

C16 upgrade

Dear Tommy, I have seen lots of expansion estridges advertised for the Commodore 16 which claim to expand my humble little machine to 64K.

If I buy one of these — and they're none too cheap — will I be able to use it like a Commodore 64 and run 64 software? Answer appreciated.

The short yet sharp answer to your query is a resounding no. There are two reasons for this. Firstly, the C-16's Basic is rather different to that on the 64 so programs will probably foul up with syntax errors.

Secondly, many commercial programs are written in machine-code. Since the memory map on the 64 is organised differently to that on the 16, running such programs would cause the machine to crash because none of the code would be sitting in the right place.

The expansions you refer to are only useful if they're accompanied by software or include extended Basic commands for use in your own programming.

COMMODORE *user*

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